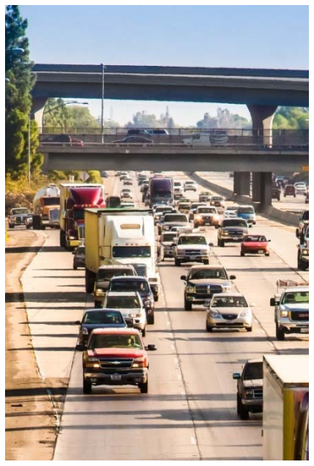
Centennial Corridor Project

City of Bakersfield and Kern County, CA
District 6 - KER - 58 - PM T31.7 to PM R55.6
District 6 - KER - 99 - PM 21.2 to PM 26.2

Project ID # 0600000484

SCH #2008091102

Draft Environmental Impact Report/ Environmental Impact Statement and Section 4(f) Evaluation



Volume 2 of 3

Prepared by the
State of California Department of Transportation

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by the California Department of Transportation under its assumption of responsibility pursuant to 23 U.S. Code 327.

November 2015

Caltrans

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Figures bound in this Volume (2 of 3)

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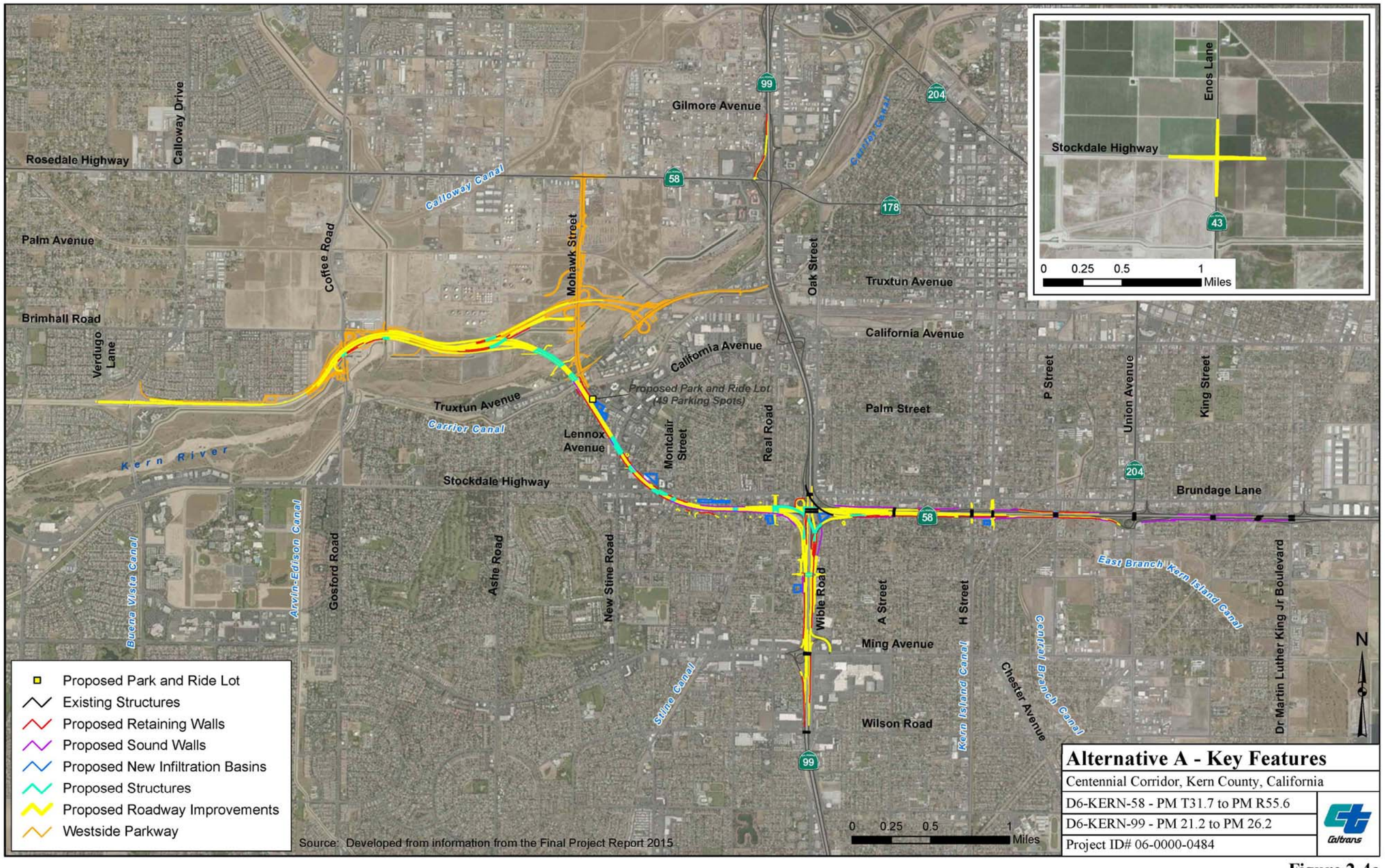

Rosedale Highway
Calloway Drive
Gilmore Avenue
99
204
58
178
Calloway Canal
Carrier Canal
Palm Avenue
Coffee Road
Mohawk Street
Oak Street
Truxtun Avenue
Brimhall Road
Verdugo Lane
California Avenue
Proposed Park and Ride Lot
(49 Parking Spots)
Truxtun Avenue
Carrier Canal
Lennox Avenue
Montclair Street
Real Road
Palm Street
P Street
Union Avenue
King Street
Kern River
Stockdale Highway
Brundage Lane
Buena Vista Canal
Arvin-Edison Canal
Gosford Road
Ashe Road
New Stine Road
Wible Road
A Street
H Street
East Branch Kern Island Canal
Central Branch Canal
Dr Martin Luther King Jr Boulevard
Ming Avenue
Stine Canal
Kern Island Canal
Chester Avenue
Wilson Road
Enos Lane
Stockdale Highway
43
0 0.25 0.5 1 Miles
N
Proposed Park and Ride Lot
Existing Structures
Proposed Retaining Walls
Proposed Sound Walls
Proposed New Infiltration Basins
Proposed Structures
Proposed Roadway Improvements
Westside Parkway
Source: Developed from information from the Final Project Report 2015
0 0.25 0.5 1 Miles
Alternative A - Key Features
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 2-4a

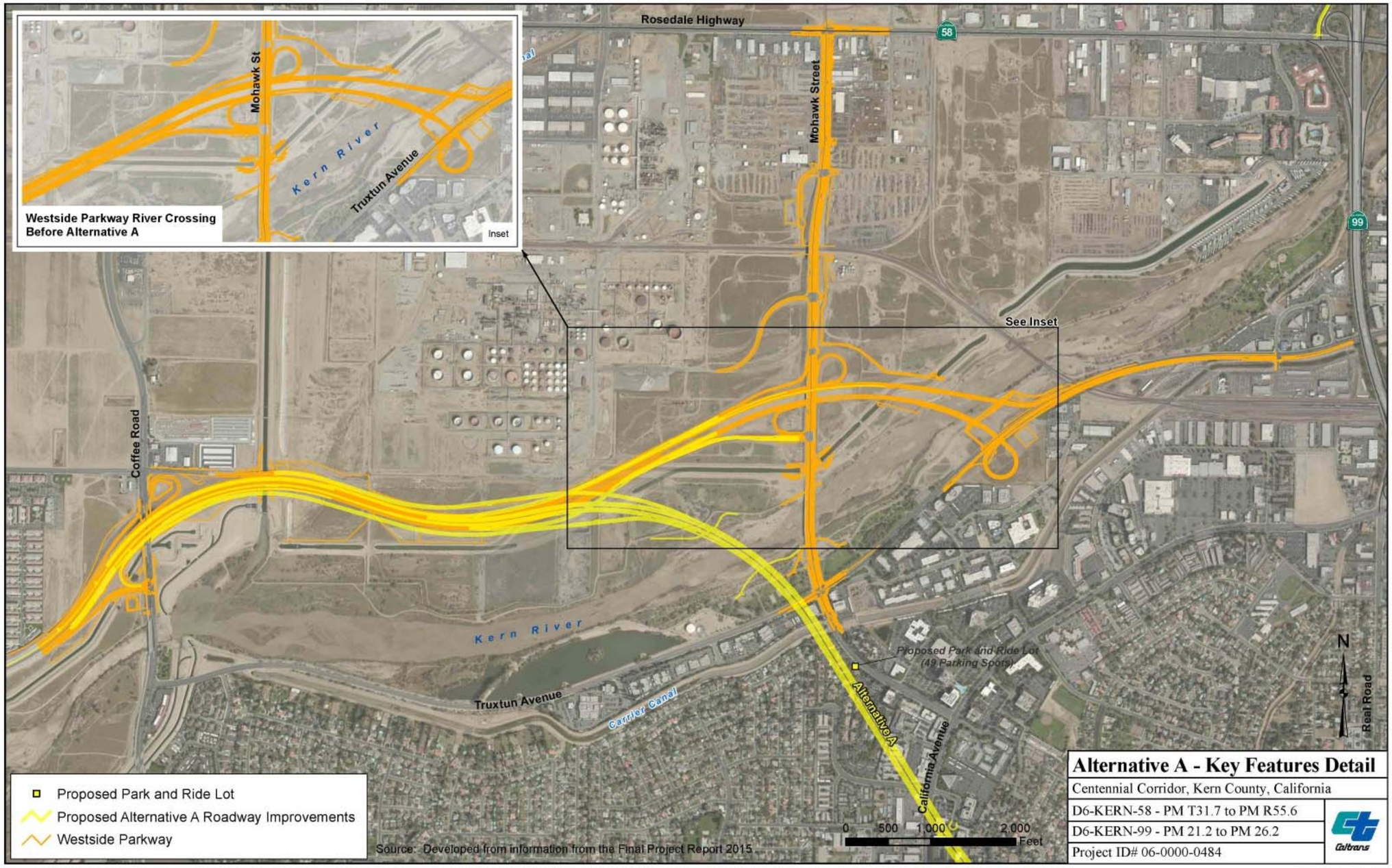

Rosedale Highway
58
99
Mohawk Street
Mohawk St
Kern River
Truxtun Avenue
Westside Parkway River Crossing
Before Alternative A
Inset
See Inset
Coffee Road
Kern River
Truxtun Avenue
Carrier Canal
Proposed Park and Ride Lot
(49 Parking Spots)
Alternative A
California Avenue
Real Road
N
Proposed Park and Ride Lot
Proposed Alternative A Roadway Improvements
Westside Parkway
Source: Developed from information from the Final Project Report 2015
0 500 1,000 2,000
Feet
Alternative A - Key Features Detail
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 2-4b

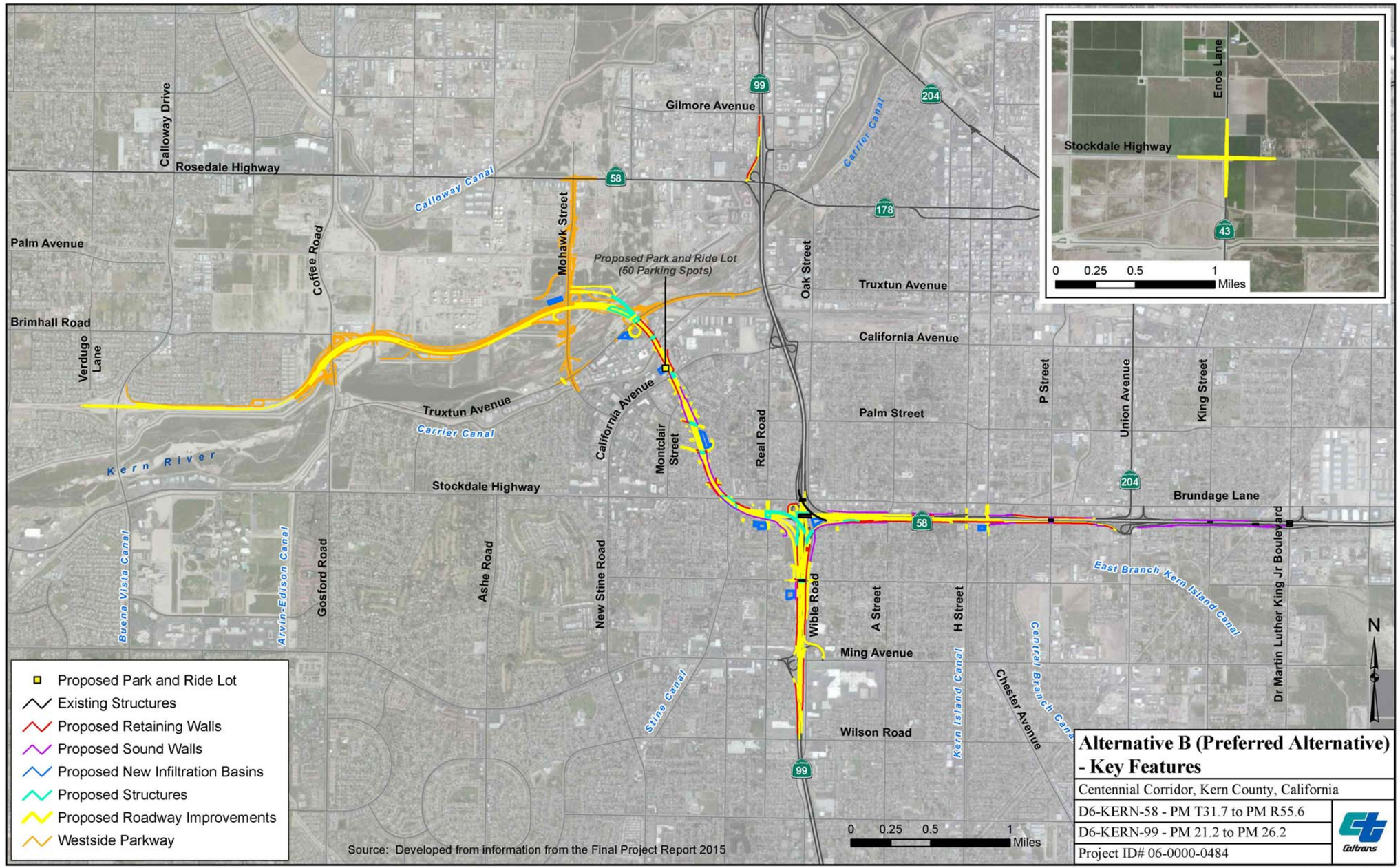

Calloway Drive
Rosedale Highway
Calloway Canal
Gilmore Avenue
99
204
Carrier Canal
58
178
Palm Avenue
Coffee Road
Mohawk Street
Proposed Park and Ride Lot
(50 Parking Spots)
Oak Street
Truxtun Avenue
Brimhall Road
Verdugo Lane
California Avenue
P Street
Union Avenue
King Street
Truxtun Avenue
Carrier Canal
California Avenue
Montclair Street
Real Road
Palm Street
Kern River
Stockdale Highway
Brundage Lane
Buena Vista Canal
Arvin-Edison Canal
Gosford Road
Ashe Road
New Stine Road
Wible Road
A Street
H Street
East Branch Kern Island Canal
Dr Martin Luther King Jr Boulevard
Ming Avenue
Stine Canal
Kern Island Canal
Chester Avenue
Central Branch Canal
Wilson Road
Enos Lane
Stockdale Highway
43
0 0.25 0.5 1 Miles
N
Proposed Park and Ride Lot
Existing Structures
Proposed Retaining Walls
Proposed Sound Walls
Proposed New Infiltration Basins
Proposed Structures
Proposed Roadway Improvements
Westside Parkway
Source: Developed from information from the Final Project Report 2015
0 0.25 0.5 1 Miles
Alternative B (Preferred Alternative) - Key Features
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 2-5a

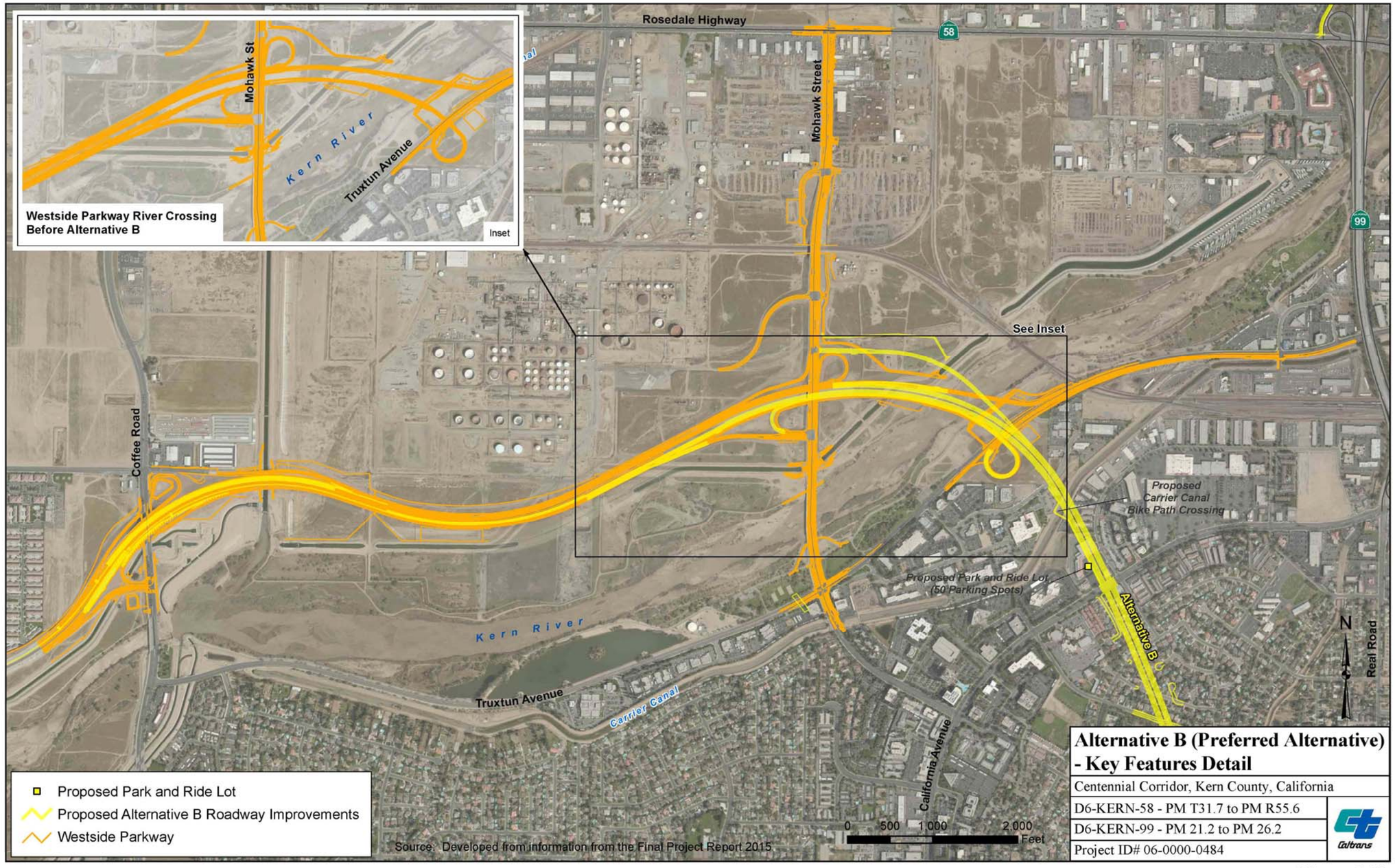

Rosedale Highway
58
99
Mohawk Street
Mohawk St
Kern River
Truxtun Avenue
Westside Parkway River Crossing
Before Alternative B
Inset
See Inset
Coffee Road
Proposed
Carrier Canal
Bike Path Crossing
Proposed Park and Ride Lot,
(50 Parking Spots)
Alternative B
Real Road
N
Kern River
Truxtun Avenue
Carrier Canal
California Avenue
Proposed Park and Ride Lot
Proposed Alternative B Roadway Improvements
Westside Parkway
Source: Developed from information from the Final Project Report 2015
0 500 1,000 2,000
Feet
Alternative B (Preferred Alternative)
- Key Features Detail
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 2-5b

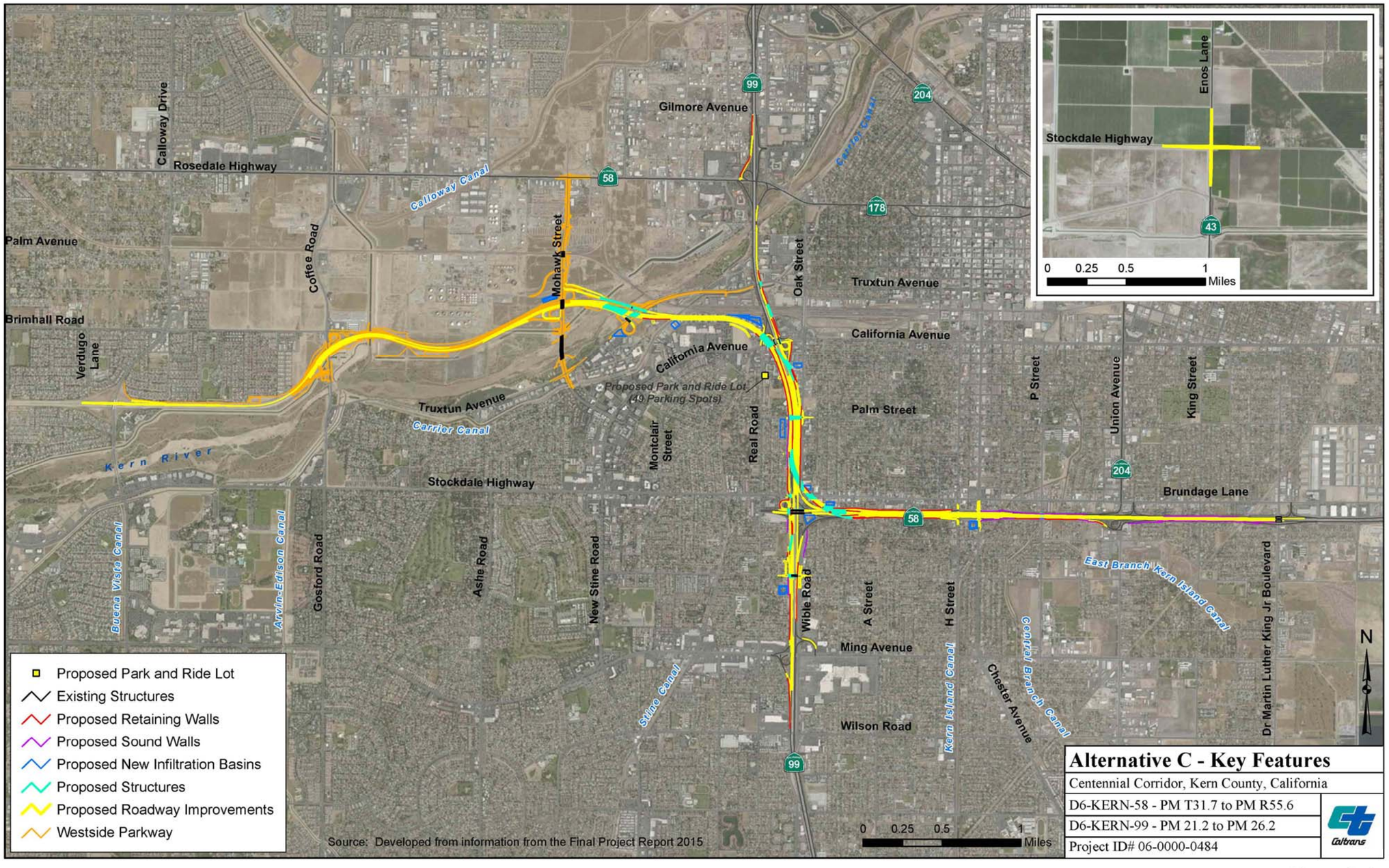

Calloway Drive
Rosedale Highway
Calloway Canal
Gilmore Avenue
Carrier Canal
99
204
58
178
43
Enos Lane
Stockdale Highway
0 0.25 0.5 1 Miles
Palm Avenue
Coffee Road
Mohawk Street
Oak Street
Truxtun Avenue
Brimhall Road
Verdugo Lane
California Avenue
Proposed Park and Ride Lot (49 Parking Spots)
P Street
Union Avenue
King Street
Truxtun Avenue
Carrier Canal
Montclair Street
Real Road
Palm Street
Kern River
Stockdale Highway
Brundage Lane
Buena Vista Canal
Arvin-Edison Canal
Gosford Road
Ashe Road
New Stine Road
Wible Road
A Street
H Street
East Branch Kern Island Canal
Dr Martin Luther King Jr Boulevard
Ming Avenue
Stine Canal
Kern Island Canal
Chester Avenue
Central Branch Canal
Wilson Road
99
N
Proposed Park and Ride Lot
Existing Structures
Proposed Retaining Walls
Proposed Sound Walls
Proposed New Infiltration Basins
Proposed Structures
Proposed Roadway Improvements
Westside Parkway
Source: Developed from information from the Final Project Report 2015
0 0.25 0.5 1 Miles
Alternative C - Key Features
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 2-6a

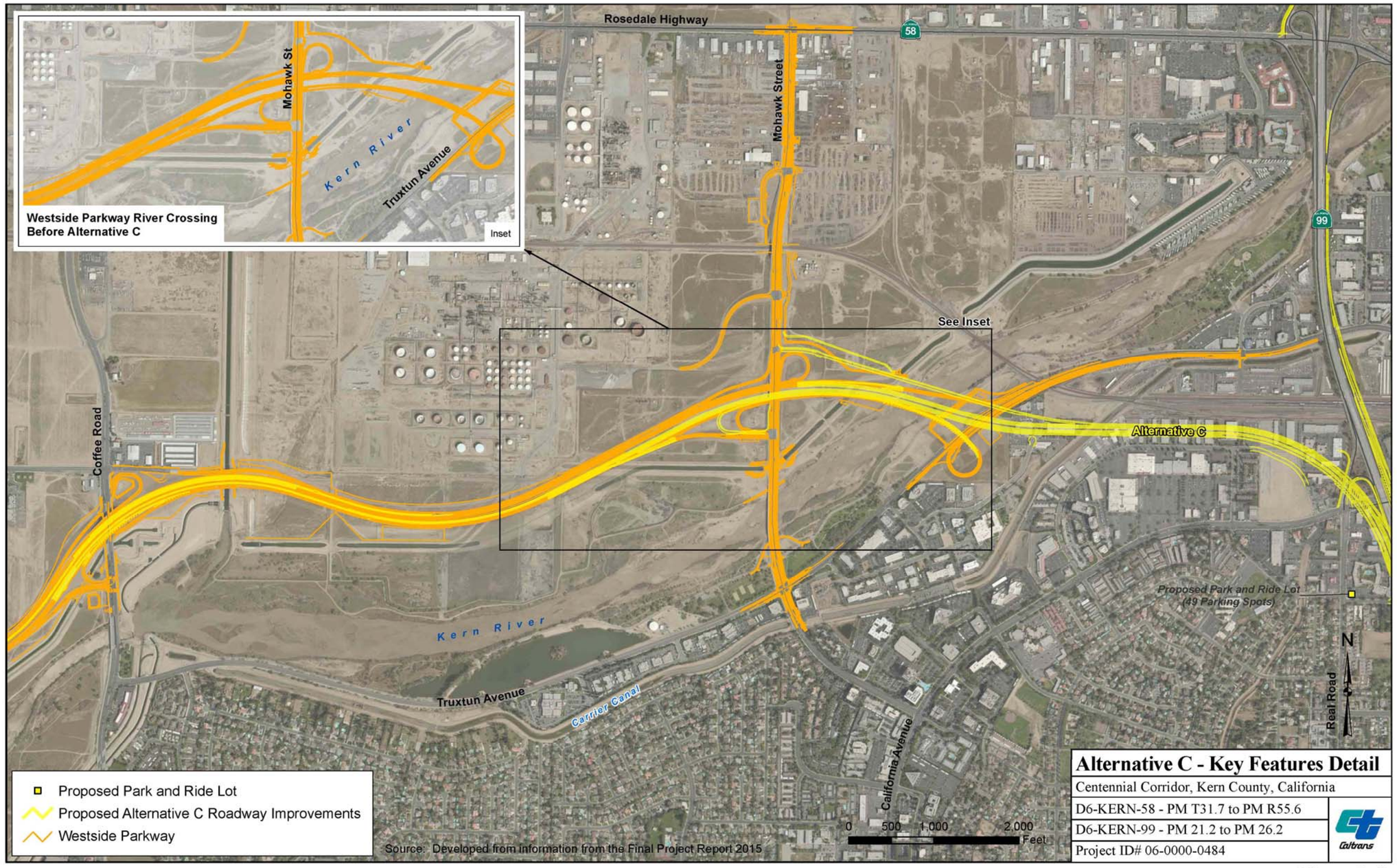
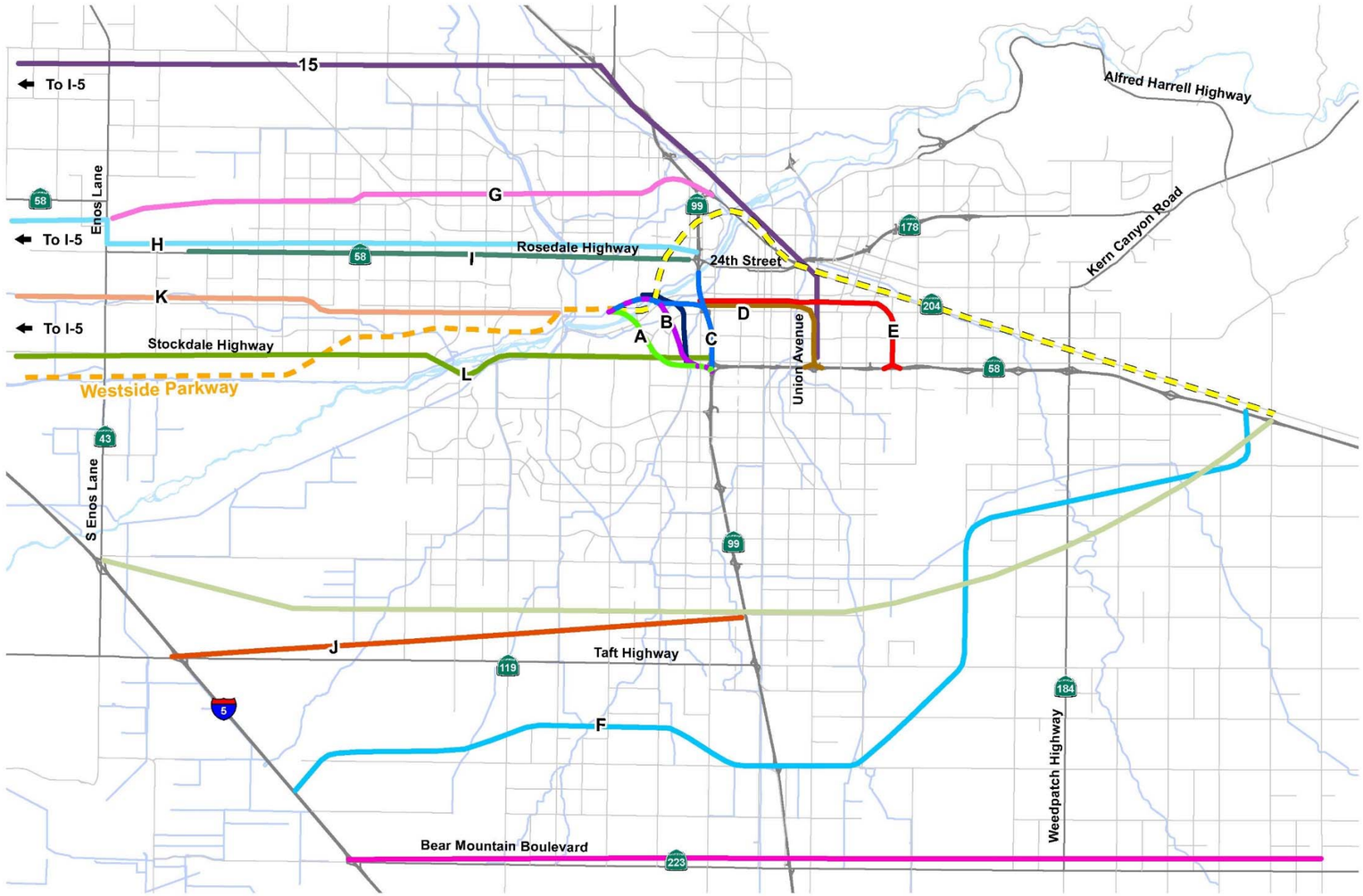

Rosedale Highway
58
Mohawk Street
99
See Inset
Alternative C
Coffee Road
Kern River
Truxtun Avenue
Carrier Canal
California Avenue
Real Road
Proposed Park and Ride Lot
(49 Parking Spots)
N
Mohawk St
Kern River
Truxtun Avenue
Westside Parkway River Crossing
Before Alternative C
Inset
Proposed Park and Ride Lot
Proposed Alternative C Roadway Improvements
Westside Parkway
Source: Developed from information from the Final Project Report 2015
0 500 1,000 2,000
Feet
Alternative C - Key Features Detail
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 2-6b



Alternatives

- Alternative A
- Alternative B *
- Alternative C
- Shared by Alternatives A/B
- Shared by Alternatives B/C
- Alternative D
- Alternative E
- Alternative F
- Alternative G
- Alternative H
- Alternative I
- Alternative J
- Alternative K
- Alternative L
- Alternative 15
- Westside Parkway
- Public Alternative 1
- Public Alternative 2
- Public Alternative 3
- Public Alternative 4

Source: Information from Caltrans 2008

Not To Scale

*Preferred Alternative

Alternatives Considered but Eliminated from Further Discussion Prior to Draft EIR/EIS

Centennial Corridor, Kern County, California

D6-KERN-58 - PM T31.7 to PM R55.6

D6-KERN-99 - PM 21.2 to PM 26.2

Project ID# 06-0000-0484

Caltrans

Figure 2-7

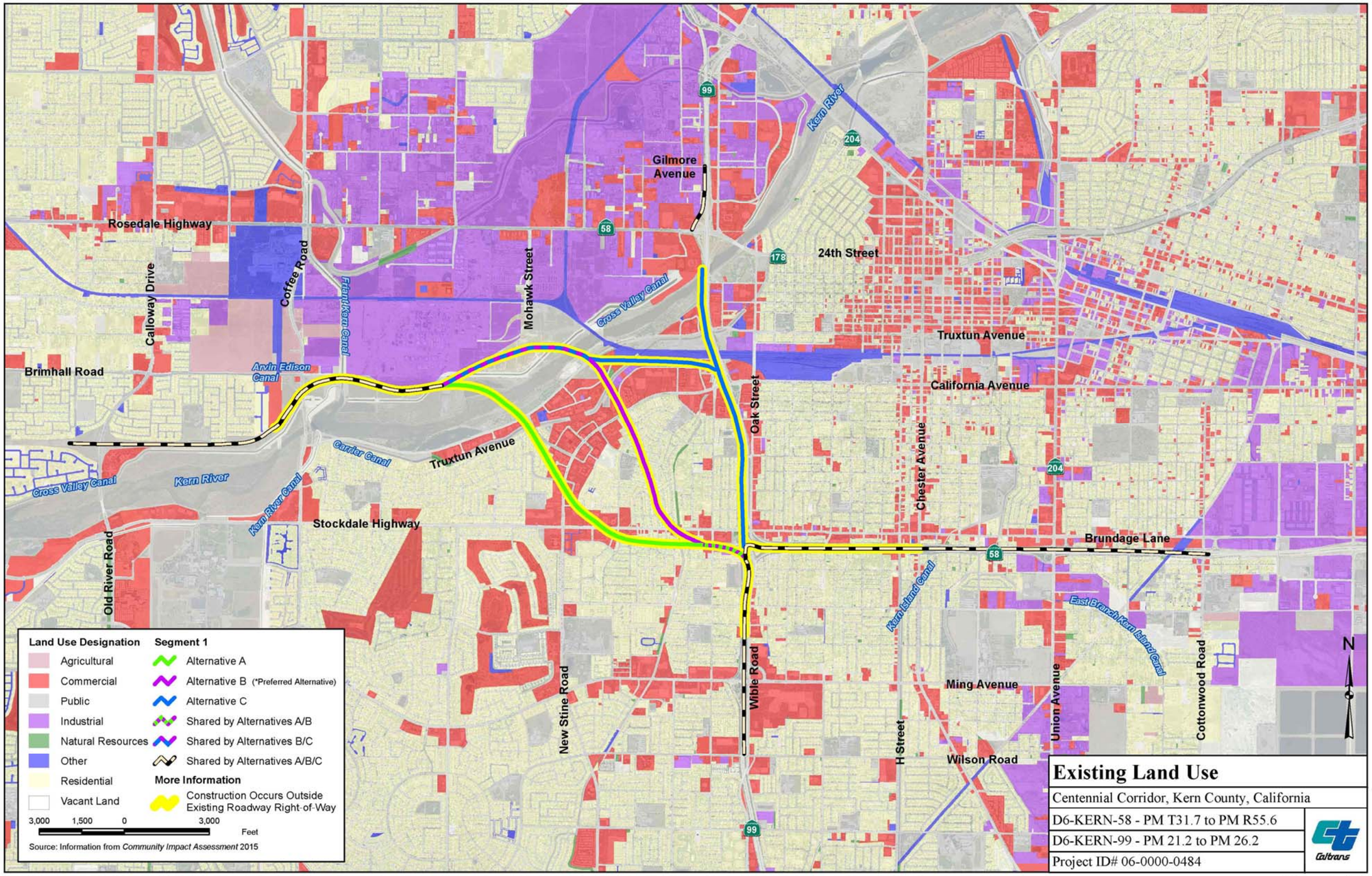

Gilmore Avenue
Rosedale Highway
Coffee Road
Calloway Drive
Friant-Kern Canal
Mohawk Street
Cross Valley Canal
Kern River
24th Street
Truxtun Avenue
California Avenue
Brimhall Road
Arvin Edison Canal
Oak Street
Carrier Canal
Truxtun Avenue
Cross Valley Canal
Kern River
Kern River Canal
Stockdale Highway
Old River Road
Chester Avenue
Brundage Lane
Kern Island Canal
East Branch Kern Island Canal
New Stine Road
Wible Road
H Street
Ming Avenue
Union Avenue
Cottonwood Road
Wilson Road
99
58
178
204
N
Land Use Designation
Agricultural
Commercial
Public
Industrial
Natural Resources
Other
Residential
Vacant Land
Segment 1
Alternative A
Alternative B (*Preferred Alternative)
Alternative C
Shared by Alternatives A/B
Shared by Alternatives B/C
Shared by Alternatives A/B/C
More Information
Construction Occurs Outside Existing Roadway Right-of-Way
3,000 1,500 0 3,000
Feet
Source: Information from Community Impact Assessment 2015
Existing Land Use
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 3-1

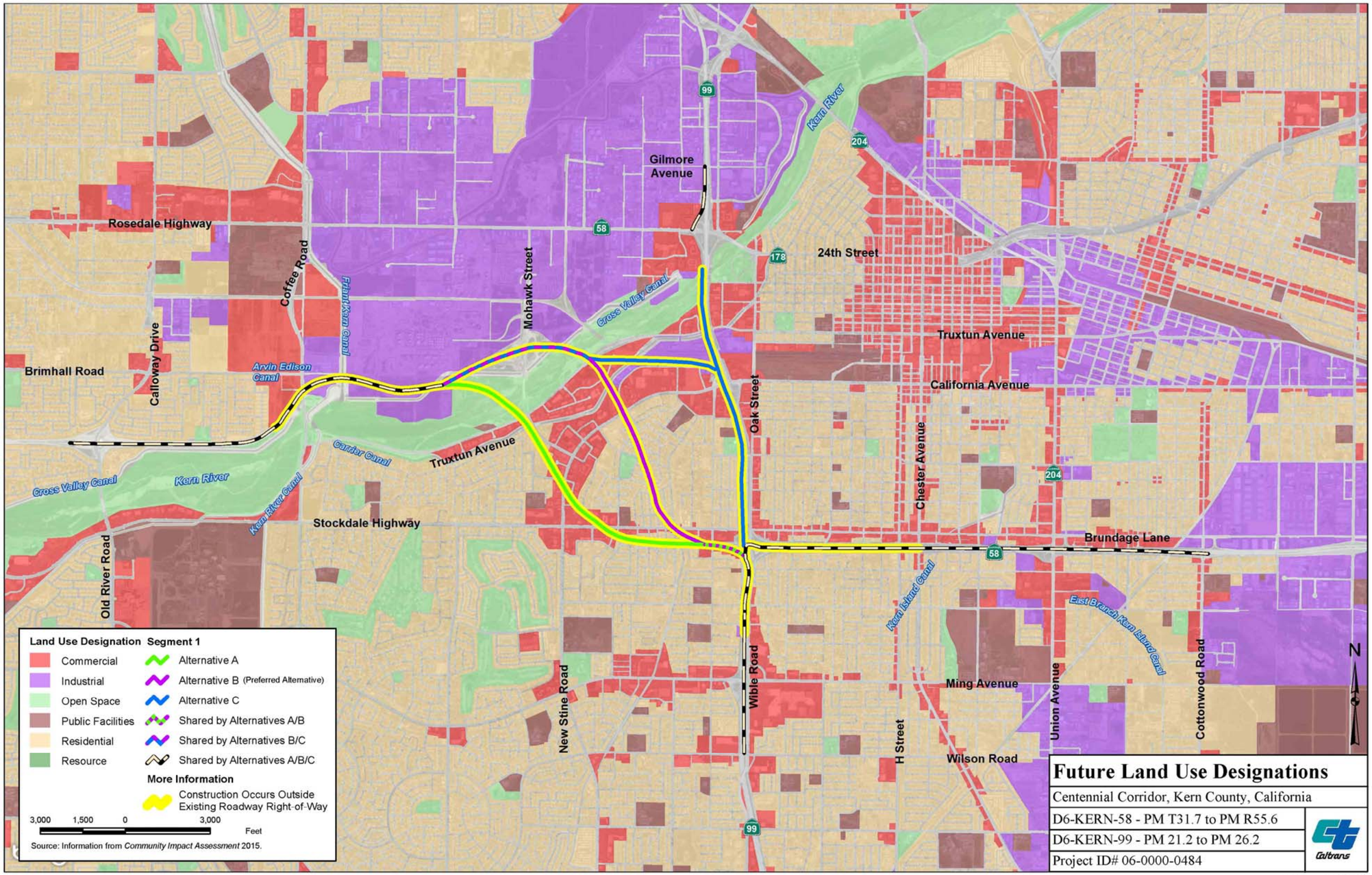

Rosedale Highway
Coffee Road
Calloway Drive
Brimhall Road
Arvin Edison Canal
Friant-Kern Canal
Mohawk Street
Gilmore Avenue
Cross Valley Canal
Kern River
24th Street
Truxtun Avenue
California Avenue
Oak Street
Chester Avenue
Carrier Canal
Kern River Canal
Stockdale Highway
Old River Road
Brundage Lane
Kern Island Canal
East Branch Kern Island Canal
New Stine Road
Wible Road
H Street
Ming Avenue
Union Avenue
Cottonwood Road
Wilson Road
99
58
178
204
N
Land Use Designation Segment 1
Commercial
Industrial
Open Space
Public Facilities
Residential
Resource
Alternative A
Alternative B (Preferred Alternative)
Alternative C
Shared by Alternatives A/B
Shared by Alternatives B/C
Shared by Alternatives A/B/C
More Information
Construction Occurs Outside Existing Roadway Right-of-Way
3,000 1,500 0 3,000
Feet
Source: Information from Community Impact Assessment 2015.
Future Land Use Designations
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 3-2

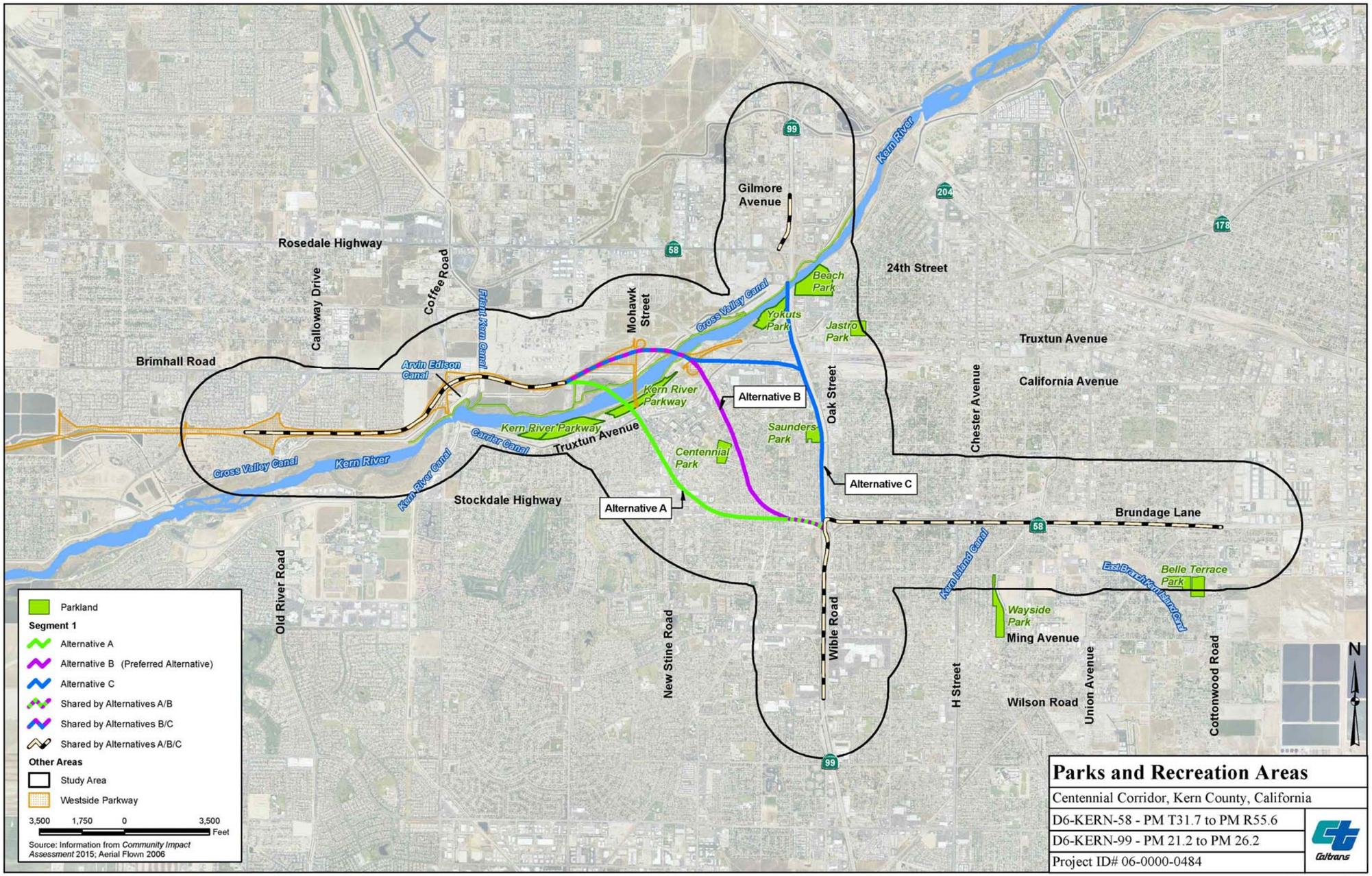
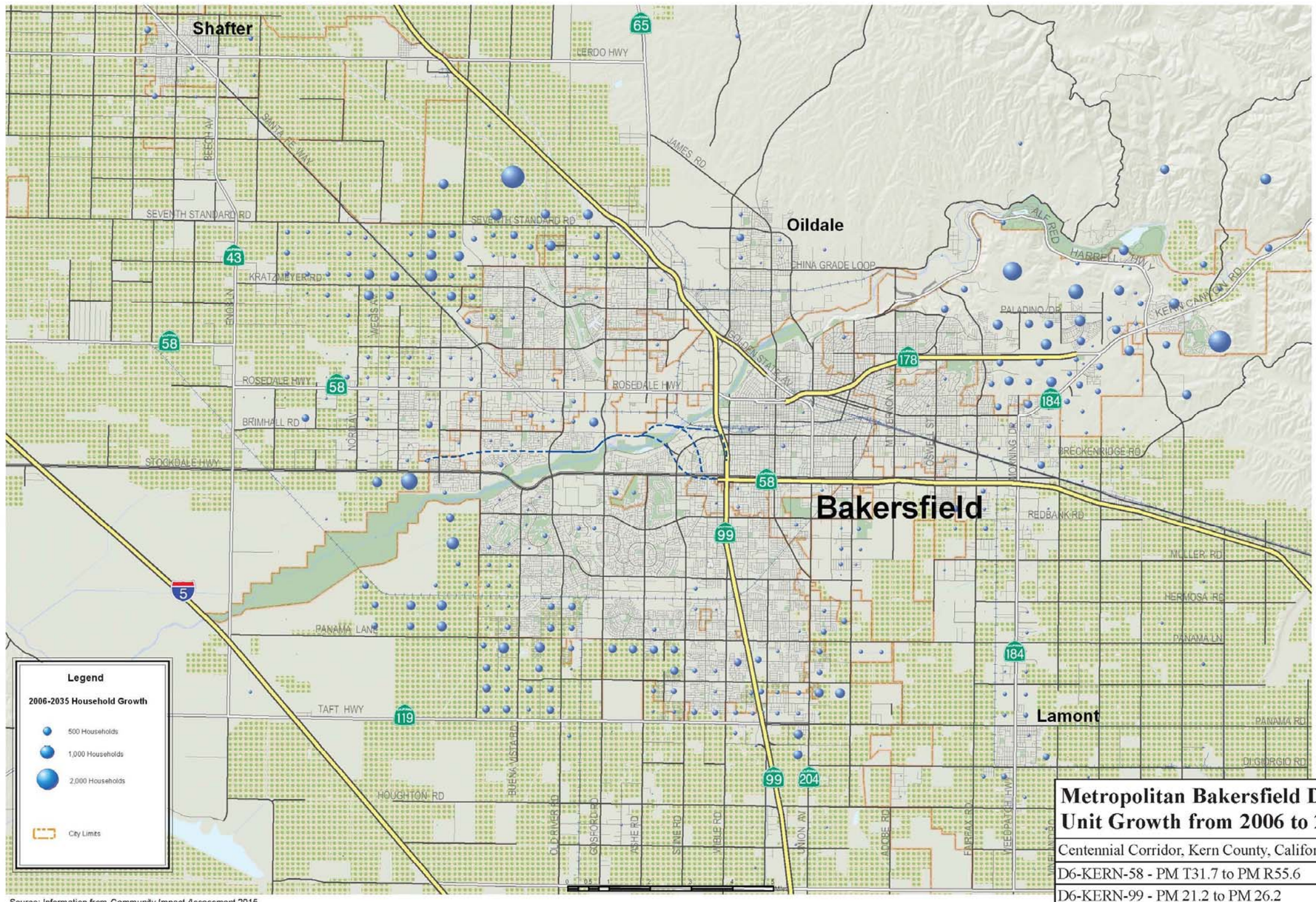

Gilmore Avenue
Rosedale Highway
Calloway Drive
Coffee Road
Friant-Kern Canal
Mohawk Street
Cross Valley Canal
Beach Park
Yokuts Park
Jastro Park
24th Street
Truxtun Avenue
California Avenue
Brimhall Road
Arvin Edison Canal
Kern River Parkway
Alternative B
Oak Street
Chester Avenue
Kern River
Carrier Canal
Saunders Park
Centennial Park
Alternative C
Cross Valley Canal
Kern River
Kern River Canal
Stockdale Highway
Alternative A
Brundage Lane
Old River Road
New Stine Road
Wible Road
Kern Island Canal
East Branch Kern Island Canal
Belle Terrace Park
Wayside Park
Ming Avenue
H Street
Union Avenue
Wilson Road
Cottonwood Road
Parkland
Segment 1
Alternative A
Alternative B (Preferred Alternative)
Alternative C
Shared by Alternatives A/B
Shared by Alternatives B/C
Shared by Alternatives A/B/C
Other Areas
Study Area
Westside Parkway
3,500 1,750 0 3,500
Feet
Source: Information from Community Impact Assessment 2015; Aerial Flown 2006
N
Parks and Recreation Areas
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 3-3



Source: Information from *Community Impact Assessment* 2015

Metropolitan Bakersfield Dwelling Unit Growth from 2006 to 2035

Centennial Corridor, Kern County, California

D6-KERN-58 - PM T31.7 to PM R55.6

D6-KERN-99 - PM 21.2 to PM 26.2

Project ID# 06-0000-0484

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Figure 3-7

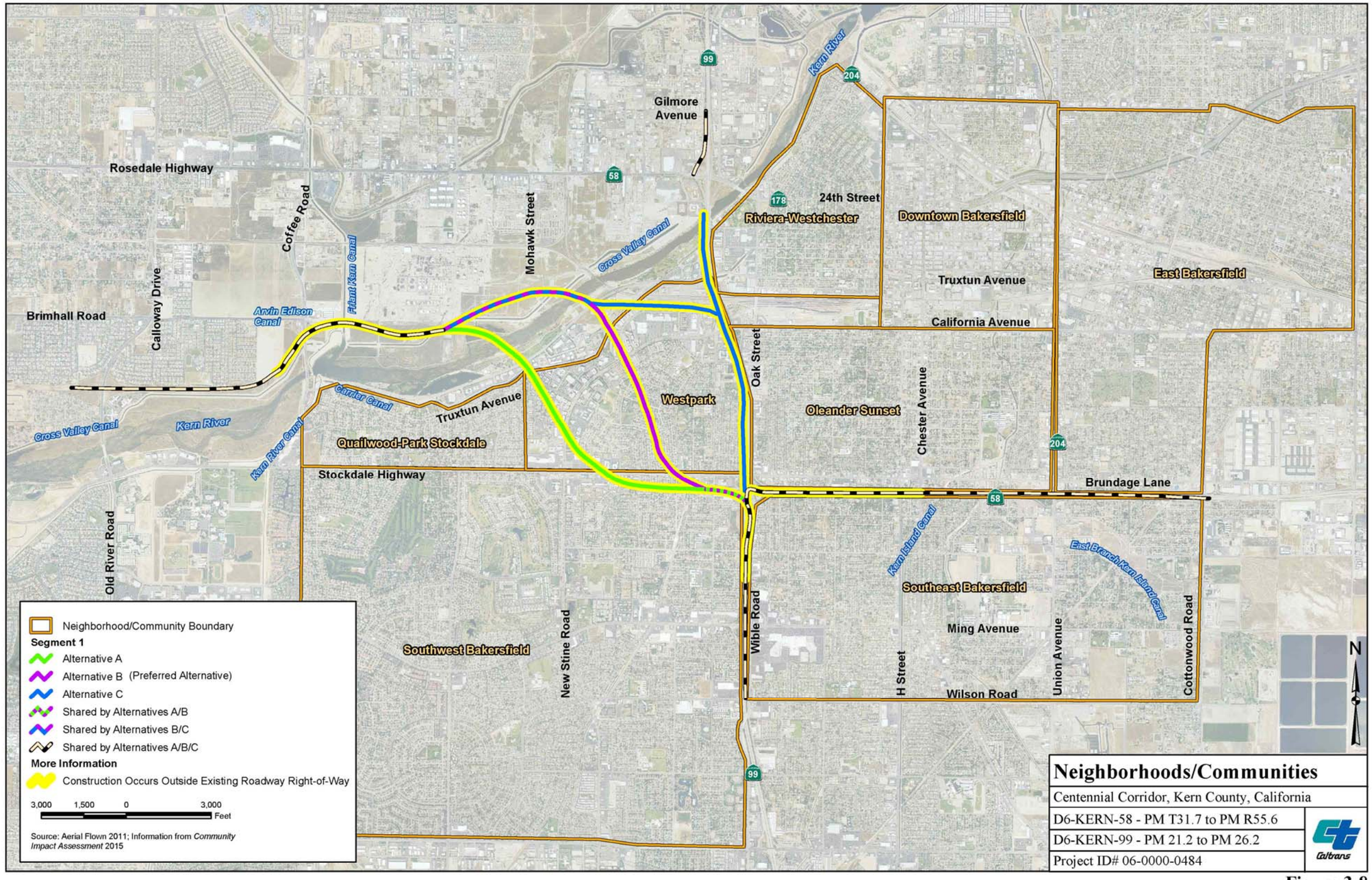
Rosedale Highway
Brimhall Road
Gilmore Avenue
Coffee Road
Calloway Drive
Mohawk Street
Arvin Edison Canal
Atlantic Kern Canal
Cross Valley Canal
Kern River
Kern River Canal
Carrier Canal
Truxtun Avenue
Quailwood-Park Stockdale
Stockdale Highway
Old River Road
New Stine Road
Southwest Bakersfield
Westpark
Oak Street
Riviera-Westchester
24th Street
Downtown Bakersfield
Truxtun Avenue
California Avenue
East Bakersfield
Oleander Sunset
Chester Avenue
Brundage Lane
Kern Island Canal
East Branch Kern Island Canal
Southeast Bakersfield
Ming Avenue
Wilson Road
Wible Road
H Street
Union Avenue
Cottonwood Road
99
58
178
204
Neighborhood/Community Boundary
Segment 1
Alternative A
Alternative B (Preferred Alternative)
Alternative C
Shared by Alternatives A/B
Shared by Alternatives B/C
Shared by Alternatives A/B/C
More Information
Construction Occurs Outside Existing Roadway Right-of-Way
3,000 1,500 0 3,000
Feet
Source: Aerial Flown 2011; Information from Community Impact Assessment 2015
N
Neighborhoods/Communities
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 3-8

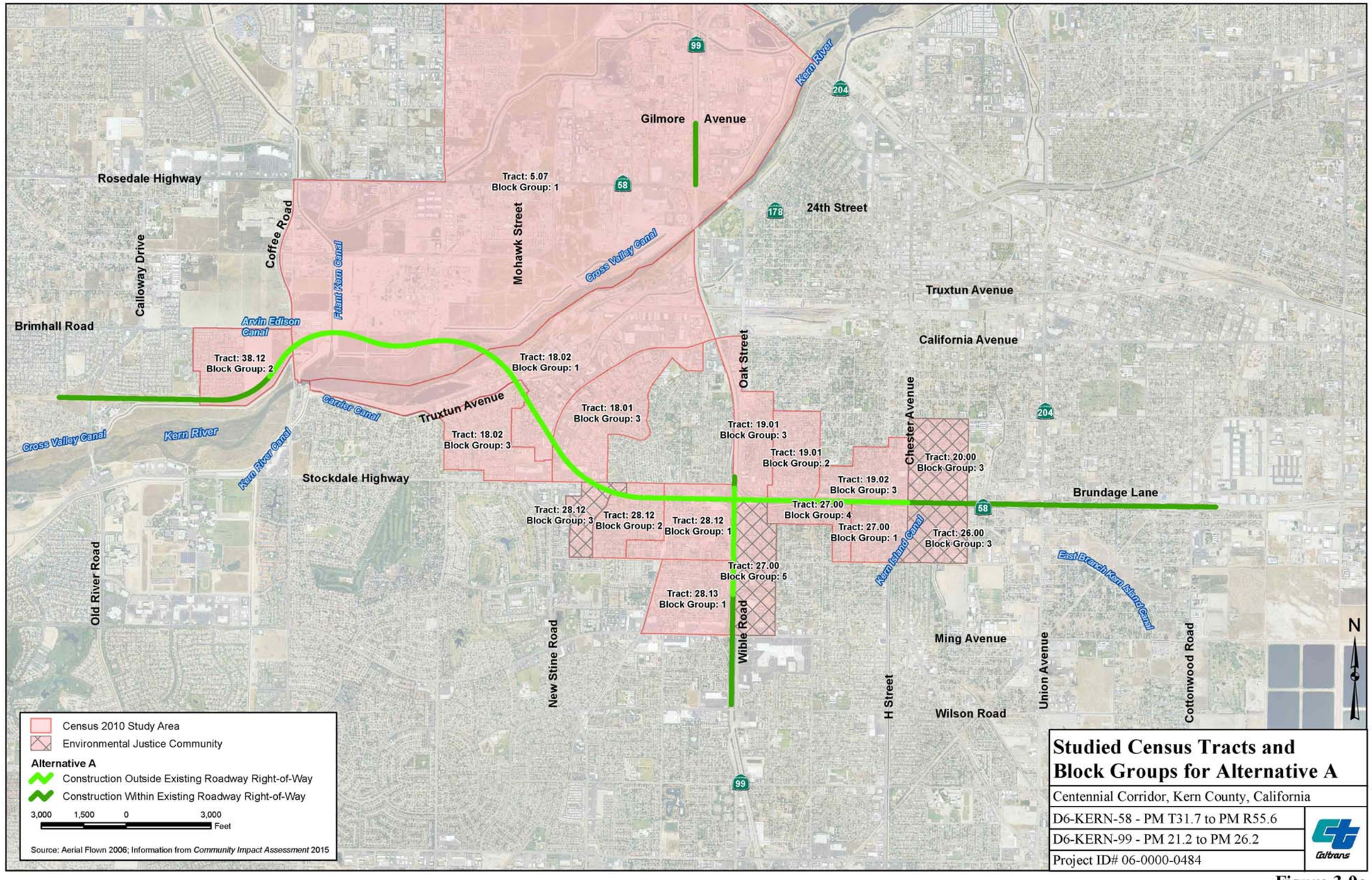
Gilmore Avenue
Rosedale Highway
Tract: 5.07
Block Group: 1
Kern River
24th Street
Coffee Road
Calloway Drive
Mohawk Street
Gross Valley Canal
Truxtun Avenue
Brimhall Road
Arvin Edison Canal
Tract: 38.12
Block Group: 2
Tract: 18.02
Block Group: 1
Oak Street
California Avenue
Chester Avenue
Carrier Canal
Truxtun Avenue
Tract: 18.01
Block Group: 3
Tract: 19.01
Block Group: 3
Cross Valley Canal
Kern River
Tract: 18.02
Block Group: 3
Tract: 19.01
Block Group: 2
Tract: 20.00
Block Group: 3
Kern River Canal
Stockdale Highway
Tract: 19.02
Block Group: 3
Brundage Lane
Tract: 28.12
Block Group: 3
Tract: 28.12
Block Group: 2
Tract: 28.12
Block Group: 1
Tract: 27.00
Block Group: 4
Tract: 27.00
Block Group: 1
Tract: 26.00
Block Group: 3
Kern Island Canal
East Branch Kern Island Canal
Tract: 27.00
Block Group: 5
Tract: 28.13
Block Group: 1
Old River Road
New Stine Road
Wible Road
Ming Avenue
H Street
Union Avenue
Cottonwood Road
Wilson Road
N
Census 2010 Study Area
Environmental Justice Community
Alternative A
Construction Outside Existing Roadway Right-of-Way
Construction Within Existing Roadway Right-of-Way
3,000 1,500 0 3,000
Feet
Source: Aerial Flown 2006; Information from Community Impact Assessment 2015
Studied Census Tracts and Block Groups for Alternative A
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
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Figure 3-9a

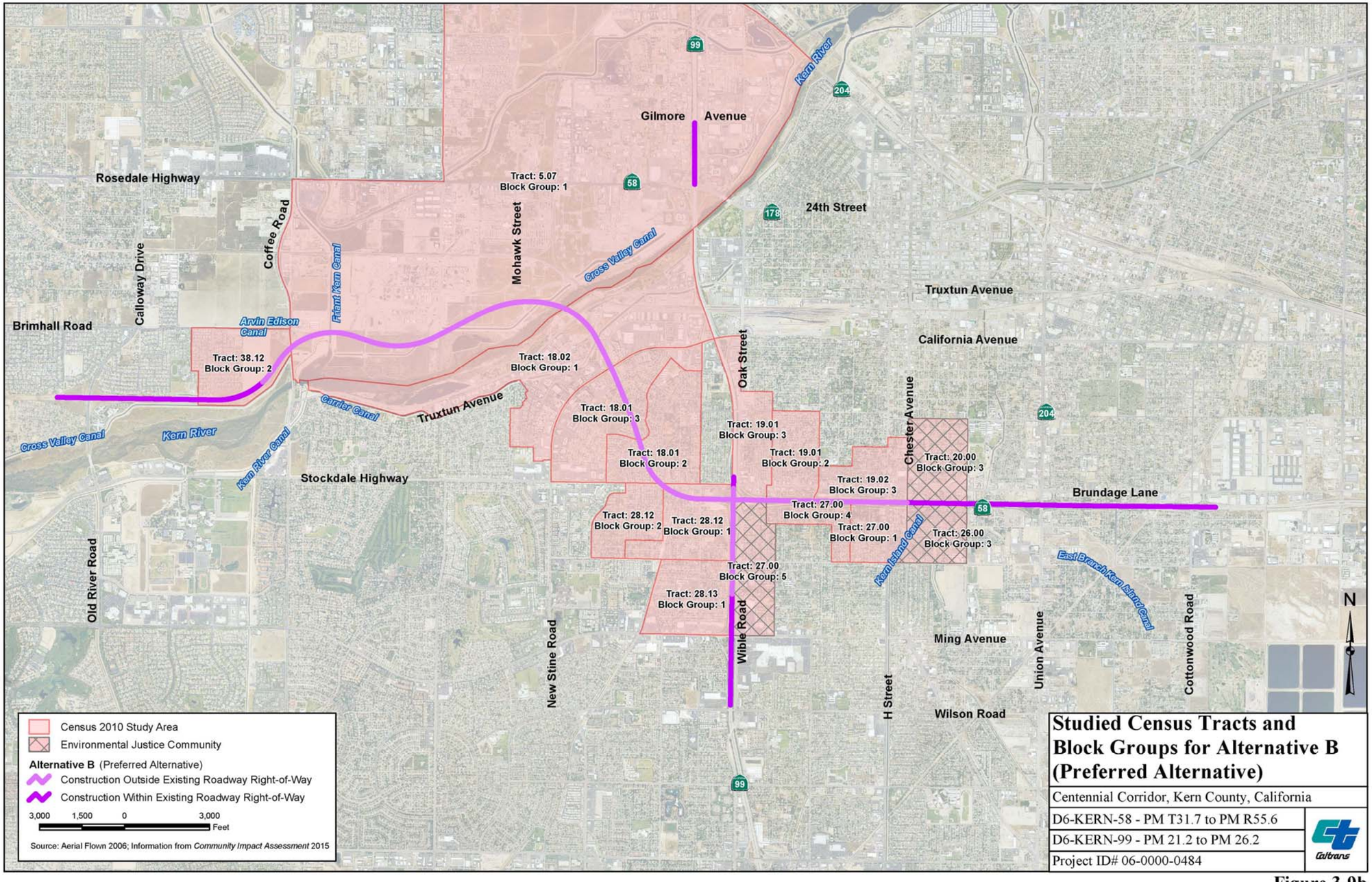

Gilmore Avenue
Rosedale Highway
Tract: 5.07
Block Group: 1
24th Street
Kern River
Coffee Road
Calloway Drive
Mohawk Street
Friant Kern Canal
Cross Valley Canal
Truxtun Avenue
Brimhall Road
Arvin Edison Canal
Tract: 38.12
Block Group: 2
Tract: 18.02
Block Group: 1
California Avenue
Oak Street
Carrier Canal
Truxtun Avenue
Tract: 18.01
Block Group: 3
Tract: 19.01
Block Group: 3
Chester Avenue
Cross Valley Canal
Kern River
Kern River Canal
Stockdale Highway
Tract: 18.01
Block Group: 2
Tract: 19.01
Block Group: 2
Tract: 20.00
Block Group: 3
Tract: 19.02
Block Group: 3
Brundage Lane
Tract: 27.00
Block Group: 4
Tract: 28.12
Block Group: 2
Tract: 28.12
Block Group: 1
Tract: 27.00
Block Group: 1
Tract: 26.00
Block Group: 3
Kern Island Canal
East Branch Kern Island Canal
Tract: 27.00
Block Group: 5
Tract: 28.13
Block Group: 1
Old River Road
New Stine Road
Wible Road
Ming Avenue
Union Avenue
Cottonwood Road
H Street
Wilson Road
N
Census 2010 Study Area
Environmental Justice Community
Alternative B (Preferred Alternative)
Construction Outside Existing Roadway Right-of-Way
Construction Within Existing Roadway Right-of-Way
3,000 1,500 0 3,000
Feet
Source: Aerial Flown 2006; Information from Community Impact Assessment 2015
Studied Census Tracts and Block Groups for Alternative B (Preferred Alternative)
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 3-9b

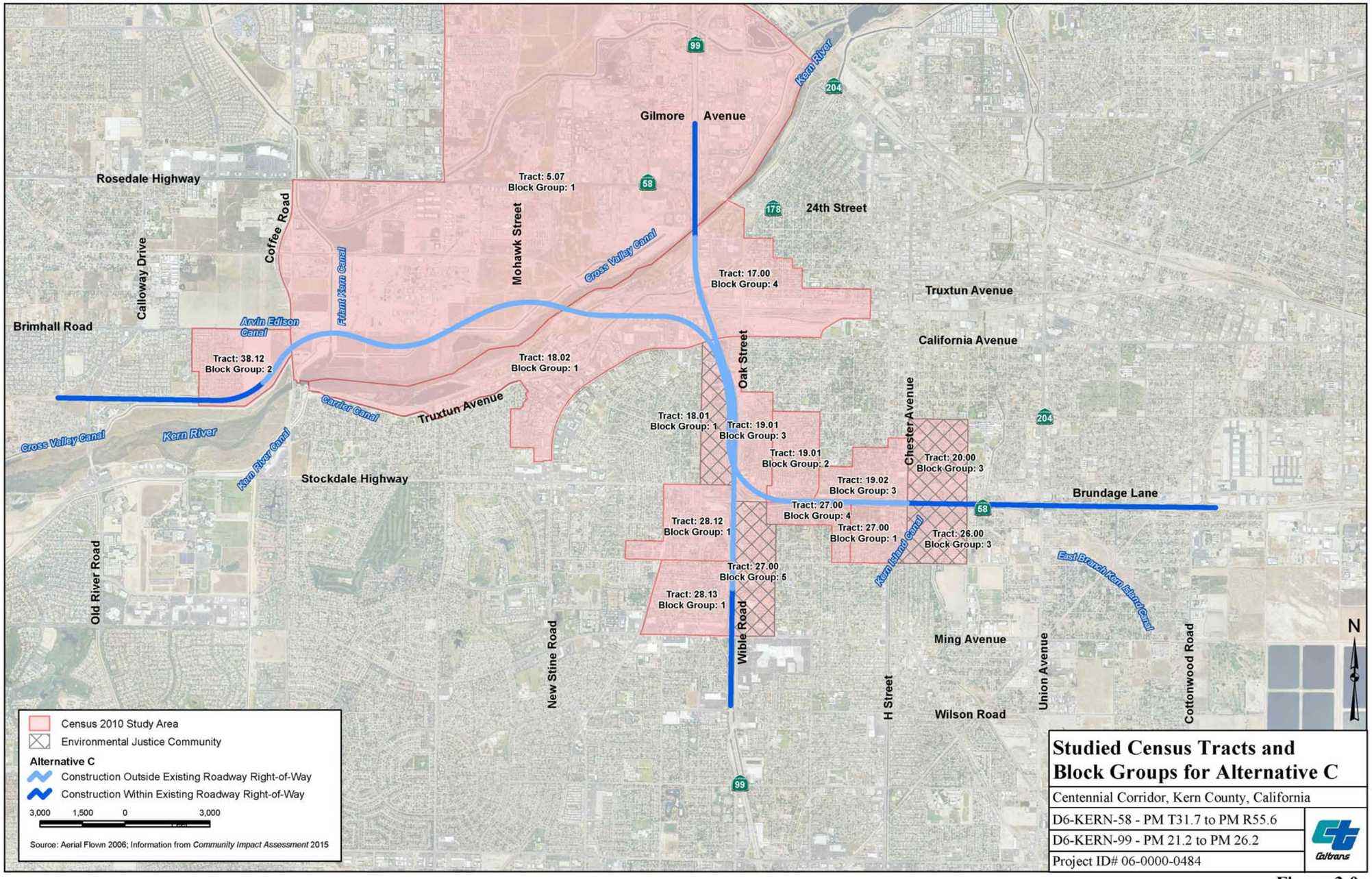

Gilmore Avenue
Kern River
Rosedale Highway
Tract: 5.07
Block Group: 1
Coffee Road
Mohawk Street
Calloway Drive
Friant Kern Canal
Cross Valley Canal
24th Street
Tract: 17.00
Block Group: 4
Truxtun Avenue
Brimhall Road
Arvin Edison Canal
Tract: 38.12
Block Group: 2
Tract: 18.02
Block Group: 1
Oak Street
California Avenue
Carrier Canal
Truxtun Avenue
Tract: 18.01
Block Group: 1
Tract: 19.01
Block Group: 3
Chester Avenue
Cross Valley Canal
Kern River
Kern River Canal
Tract: 19.01
Block Group: 2
Tract: 20.00
Block Group: 3
Stockdale Highway
Tract: 19.02
Block Group: 3
Brundage Lane
Tract: 27.00
Block Group: 4
Tract: 28.12
Block Group: 1
Tract: 27.00
Block Group: 1
Tract: 26.00
Block Group: 3
Kern Island Canal
East Branch Kern Island Canal
Tract: 27.00
Block Group: 5
Tract: 28.13
Block Group: 1
Old River Road
New Stine Road
Wible Road
Ming Avenue
H Street
Union Avenue
Cottonwood Road
Wilson Road
N
Census 2010 Study Area
Environmental Justice Community
Alternative C
Construction Outside Existing Roadway Right-of-Way
Construction Within Existing Roadway Right-of-Way
3,000 1,500 0 3,000
Source: Aerial Flown 2006; Information from Community Impact Assessment 2015
Studied Census Tracts and Block Groups for Alternative C
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 3-9c

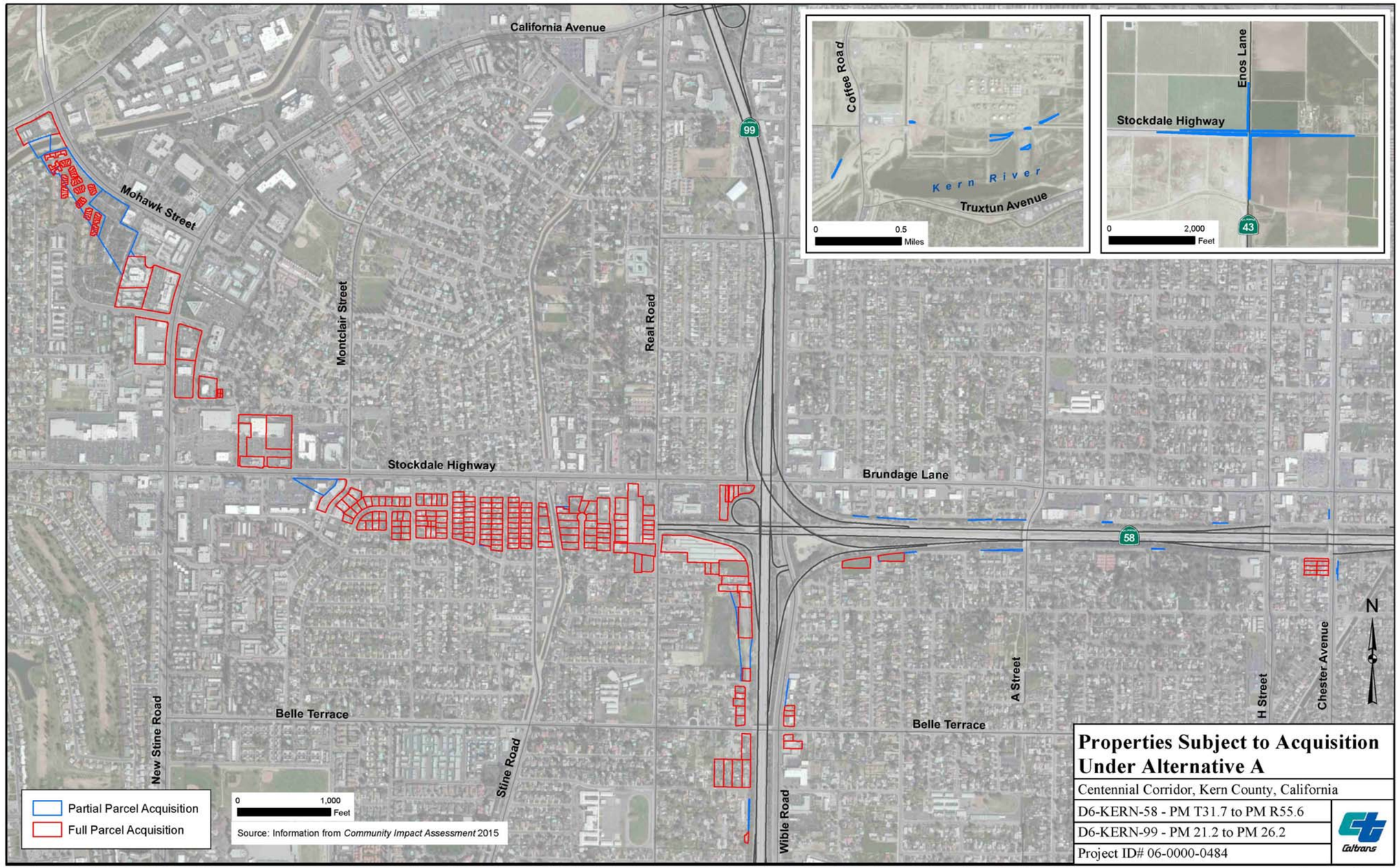

California Avenue
Mohawk Street
Montclair Street
Real Road
99
Stockdale Highway
Brundage Lane
58
Belle Terrace
New Stine Road
Stine Road
Wible Road
A Street
H Street
Chester Avenue
Belle Terrace
N
Partial Parcel Acquisition
Full Parcel Acquisition
0
1,000
Feet
Source: Information from Community Impact Assessment 2015
Coffee Road
Kern River
Truxtun Avenue
0
0.5
Miles
Enos Lane
Stockdale Highway
43
0
2,000
Feet
Properties Subject to Acquisition Under Alternative A
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 3-10a

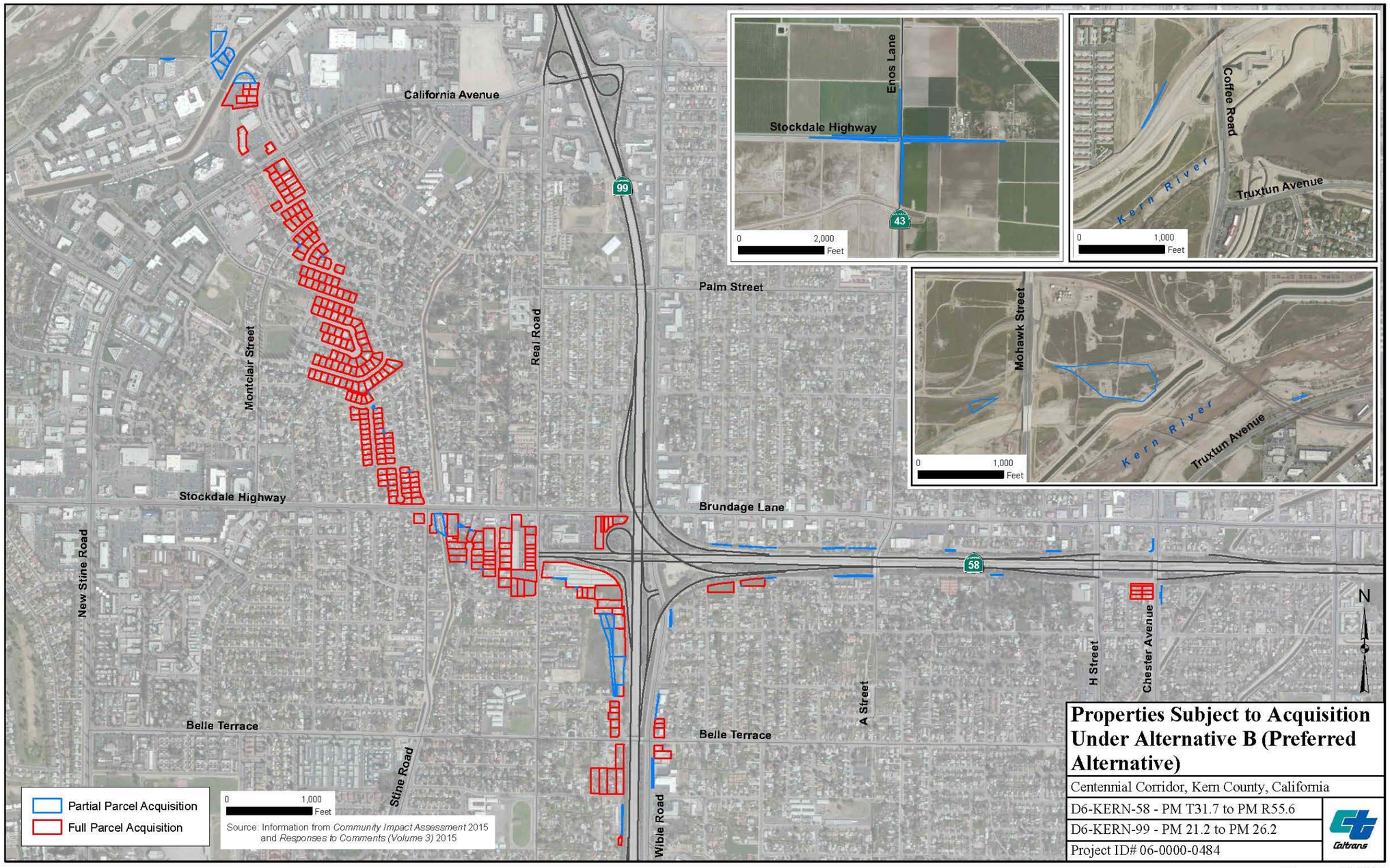

California Avenue
Stockdale Highway
Palm Street
Brundage Lane
Belle Terrace
Belle Terrace
Montclair Street
Real Road
New Stine Road
Stine Road
Wible Road
A Street
H Street
Chester Avenue
99
58
43
Enos Lane
Stockdale Highway
0 2,000 Feet
Coffee Road
Truxtun Avenue
Kern River
0 1,000 Feet
Mohawk Street
Truxtun Avenue
Kern River
0 1,000 Feet
N
Partial Parcel Acquisition
Full Parcel Acquisition
0 1,000 Feet
Source: Information from Community Impact Assessment 2015 and Responses to Comments (Volume 3) 2015
Properties Subject to Acquisition Under Alternative B (Preferred Alternative)
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 3-10b

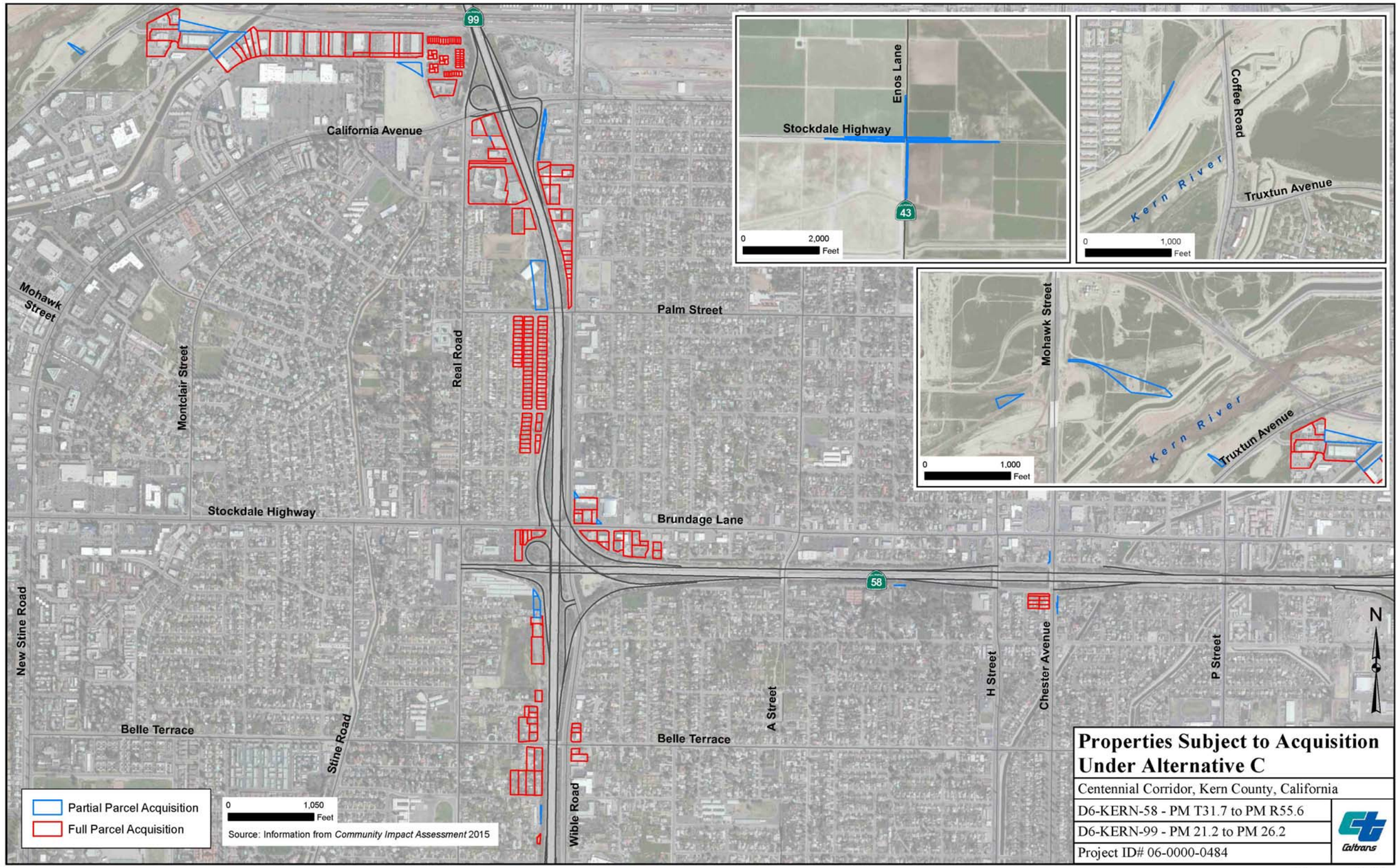
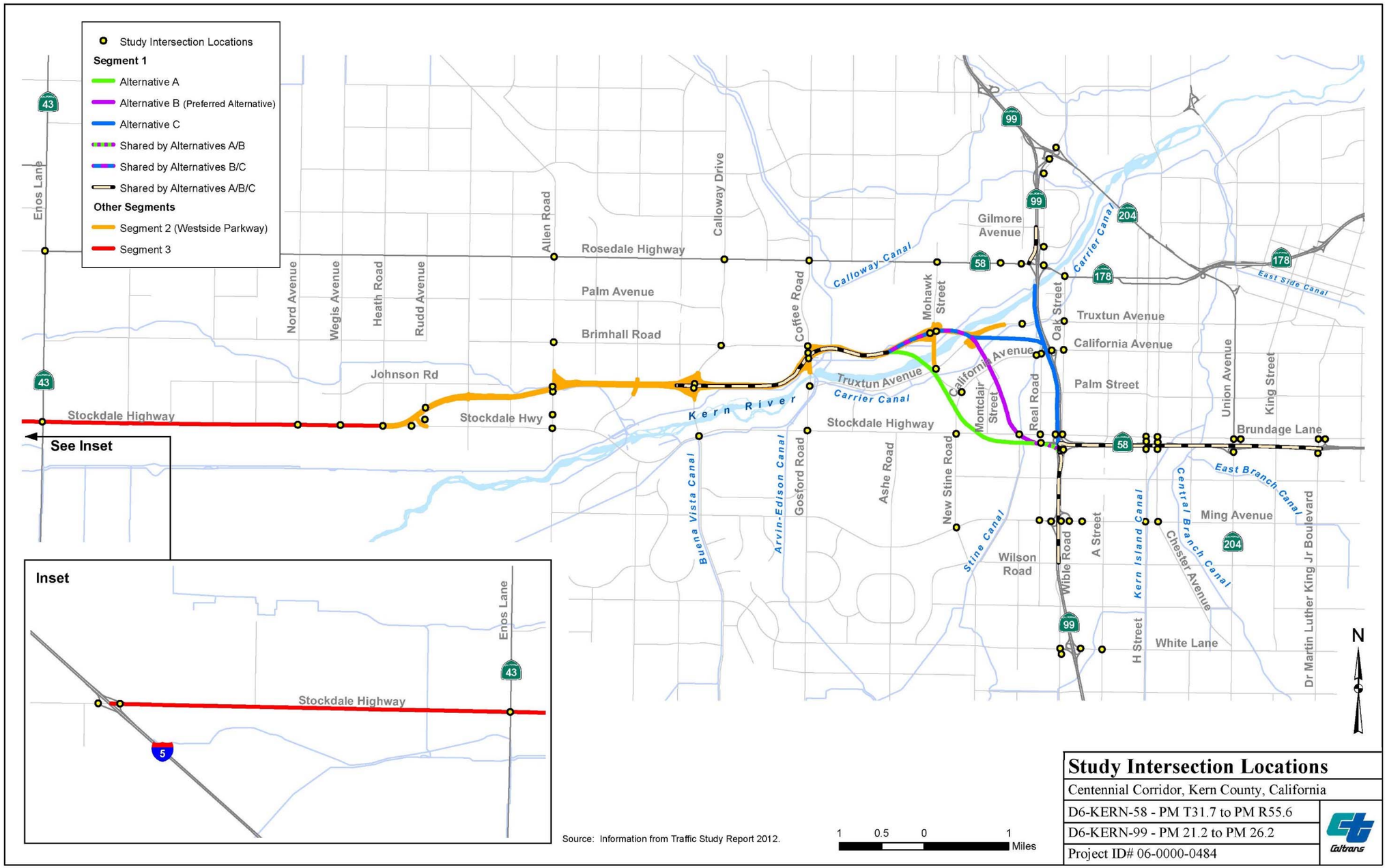

California Avenue
Palm Street
Stockdale Highway
Brundage Lane
Belle Terrace
Belle Terrace
Mohawk Street
Montclair Street
Real Road
New Stine Road
Stine Road
Wible Road
A Street
H Street
Chester Avenue
P Street
99
58
43
Enos Lane
Stockdale Highway
0 2,000 Feet
Coffee Road
Kern River
Truxtun Avenue
0 1,000 Feet
Mohawk Street
Kern River
Truxtun Avenue
0 1,000 Feet
N
Partial Parcel Acquisition
Full Parcel Acquisition
0 1,050 Feet
Source: Information from Community Impact Assessment 2015
Properties Subject to Acquisition Under Alternative C
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 3-10c



Study Intersection Locations

Centennial Corridor, Kern County, California

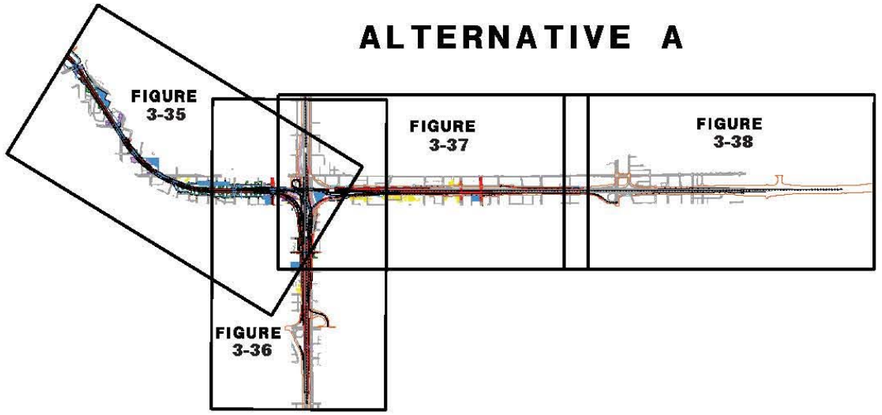
D6-KERN-58 - PM T31.7 to PM R55.6

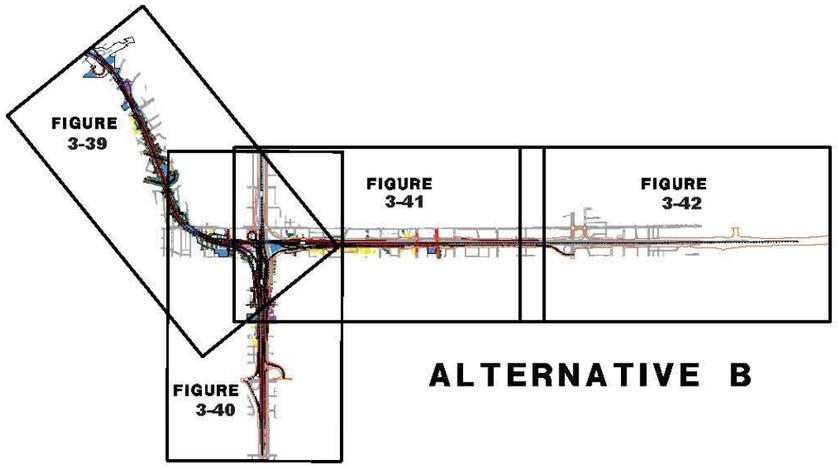
D6-KERN-99 - PM 21.2 to PM 26.2

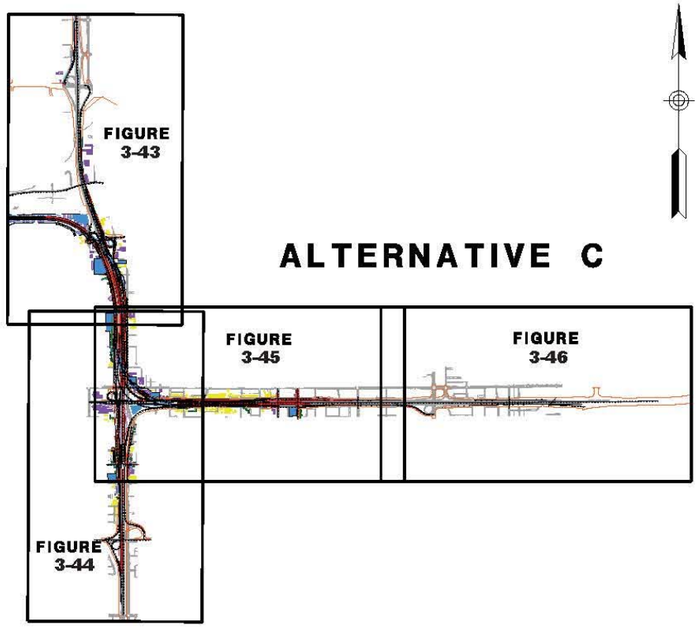
Project ID# 06-0000-0484

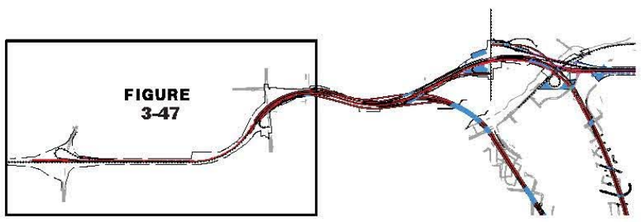
Caltrans

Figure 3-11









Centennial Corridor Key Map For Noise Measurement and Sound Wall Locations

Centennial Corridor, Kern County, California

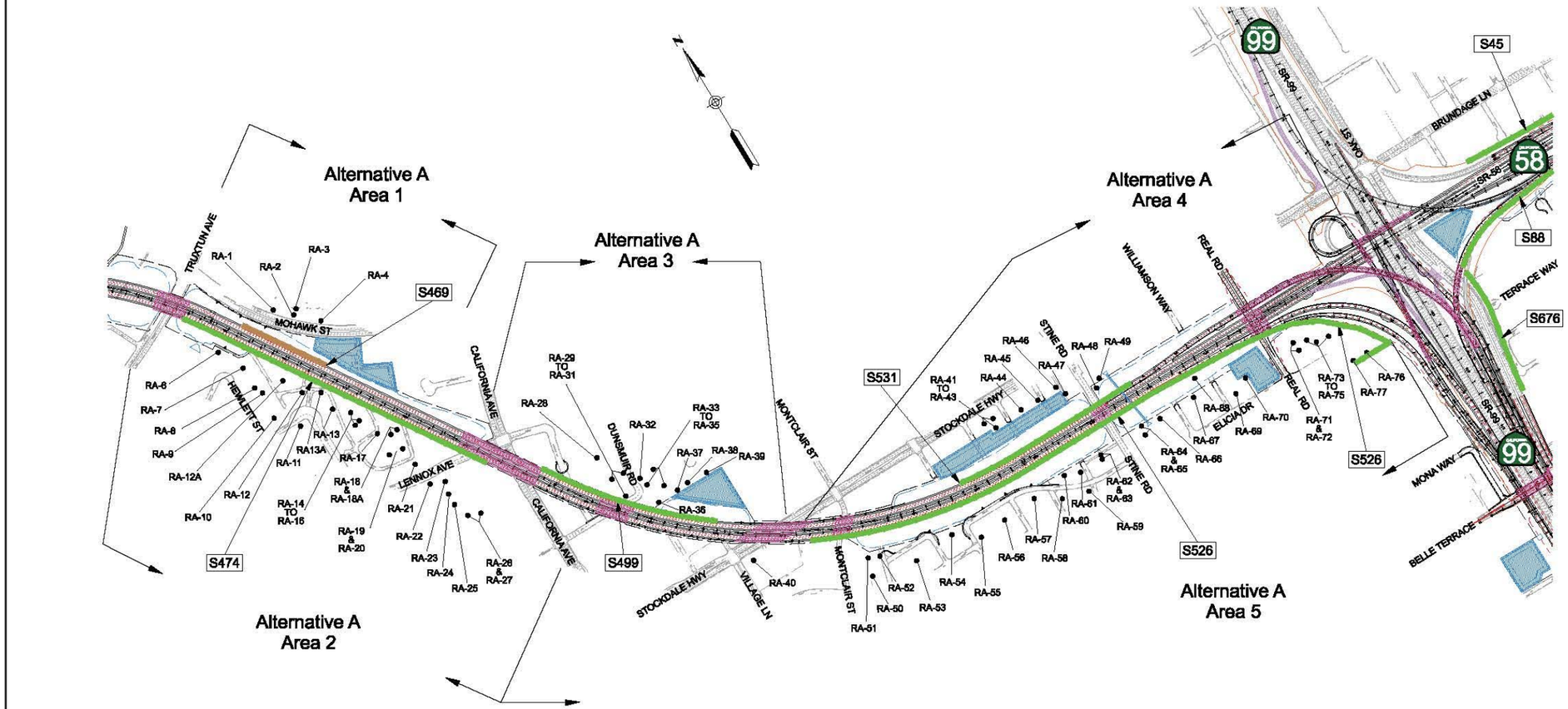
D6-KERN-58 - PM T31.7 to PM R55.6

D6-KERN-99 - PM 21.2 to PM 26.2

Project ID# 06-0000-0484

Source: Information from the *Noise Abatement Decision Report* 2014 and *Noise Study Report* 2014

Figure 3-34



Source: Information from the *Noise Abatement Decision Report* 2014 and *Noise Study Report* 2014

Centennial Corridor Alt A Noise Measurement, Receiver, and Sound Wall Locations

Centennial Corridor, Kern County, California

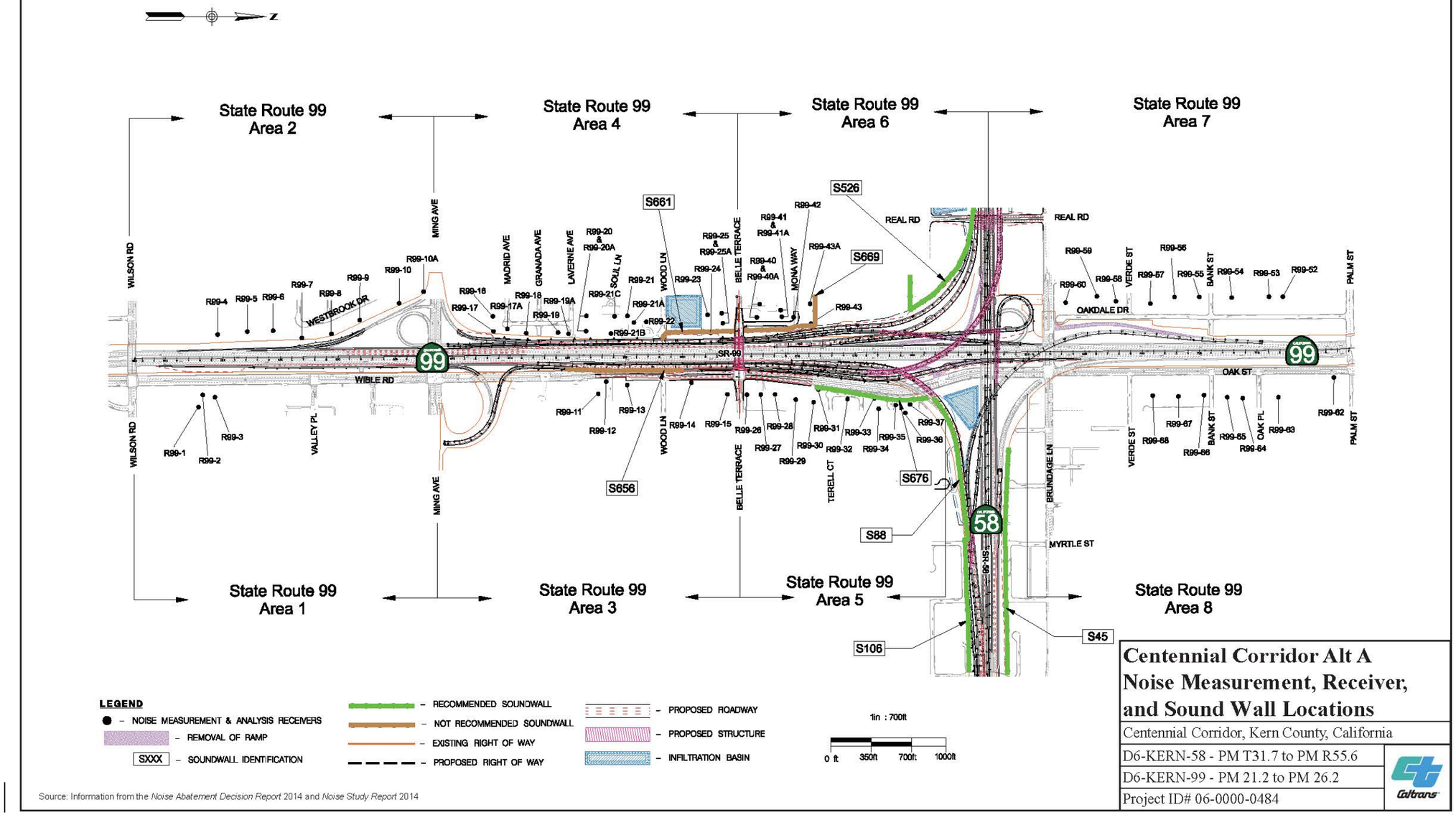
D6-KERN-58 - PM T31.7 to PM R55.6

D6-KERN-99 - PM 21.2 to PM 26.2

Project ID# 06-0000-0484

Caltrans

Figure 3-35



Source: Information from the *Noise Abatement Decision Report* 2014 and *Noise Study Report* 2014

Centennial Corridor Alt A
Noise Measurement, Receiver, and Sound Wall Locations

Centennial Corridor, Kern County, California

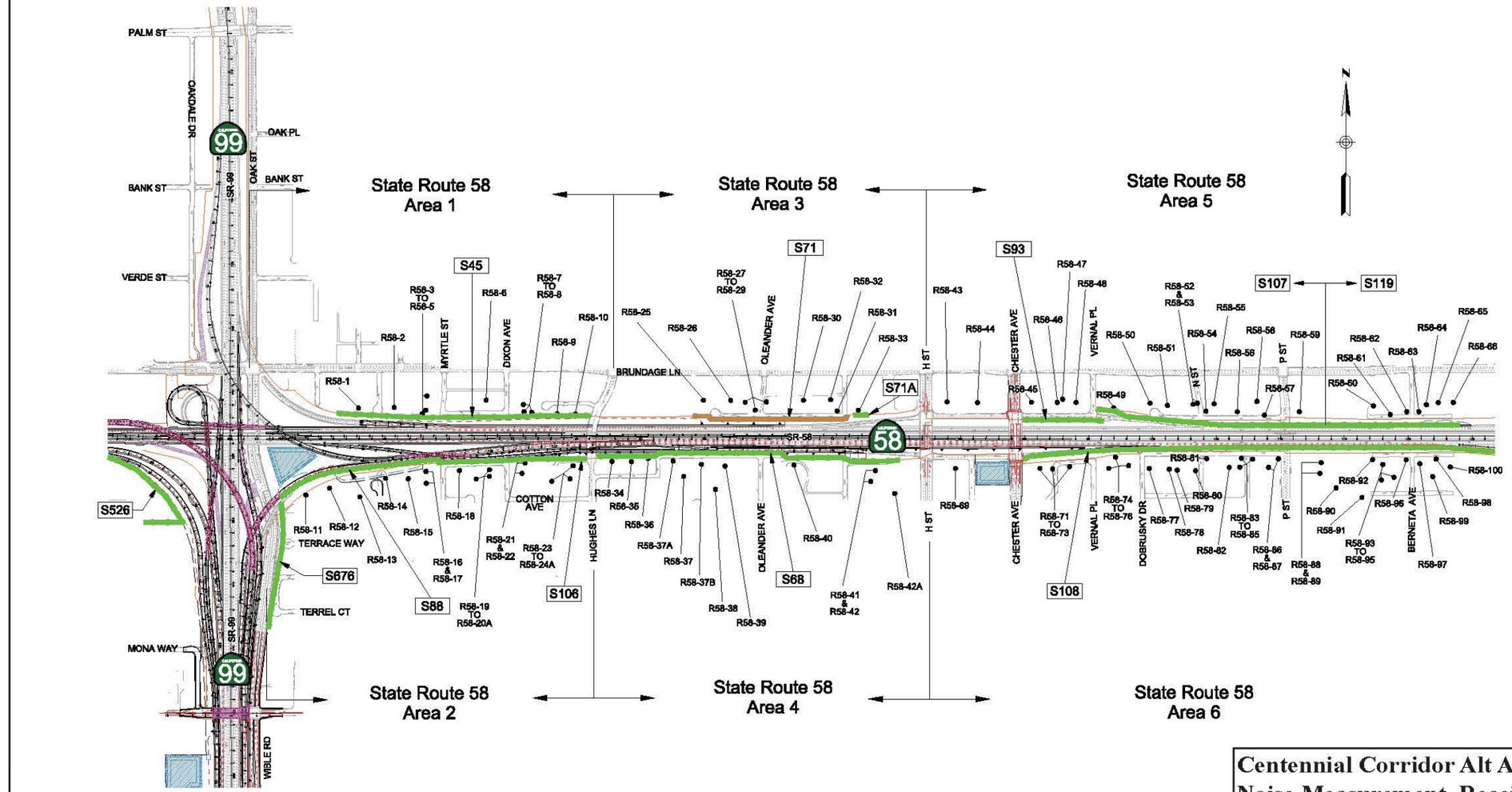
D6-KERN-58 - PM T31.7 to PM R55.6

D6-KERN-99 - PM 21.2 to PM 26.2

Project ID# 06-0000-0484

Caltrans

Figure 3-36



Source: Information from the *Noise Abatement Decision Report* 2014 and *Noise Study Report* 2014

Centennial Corridor Alt A Noise Measurement, Receiver, and Sound Wall Locations

Centennial Corridor, Kern County, California

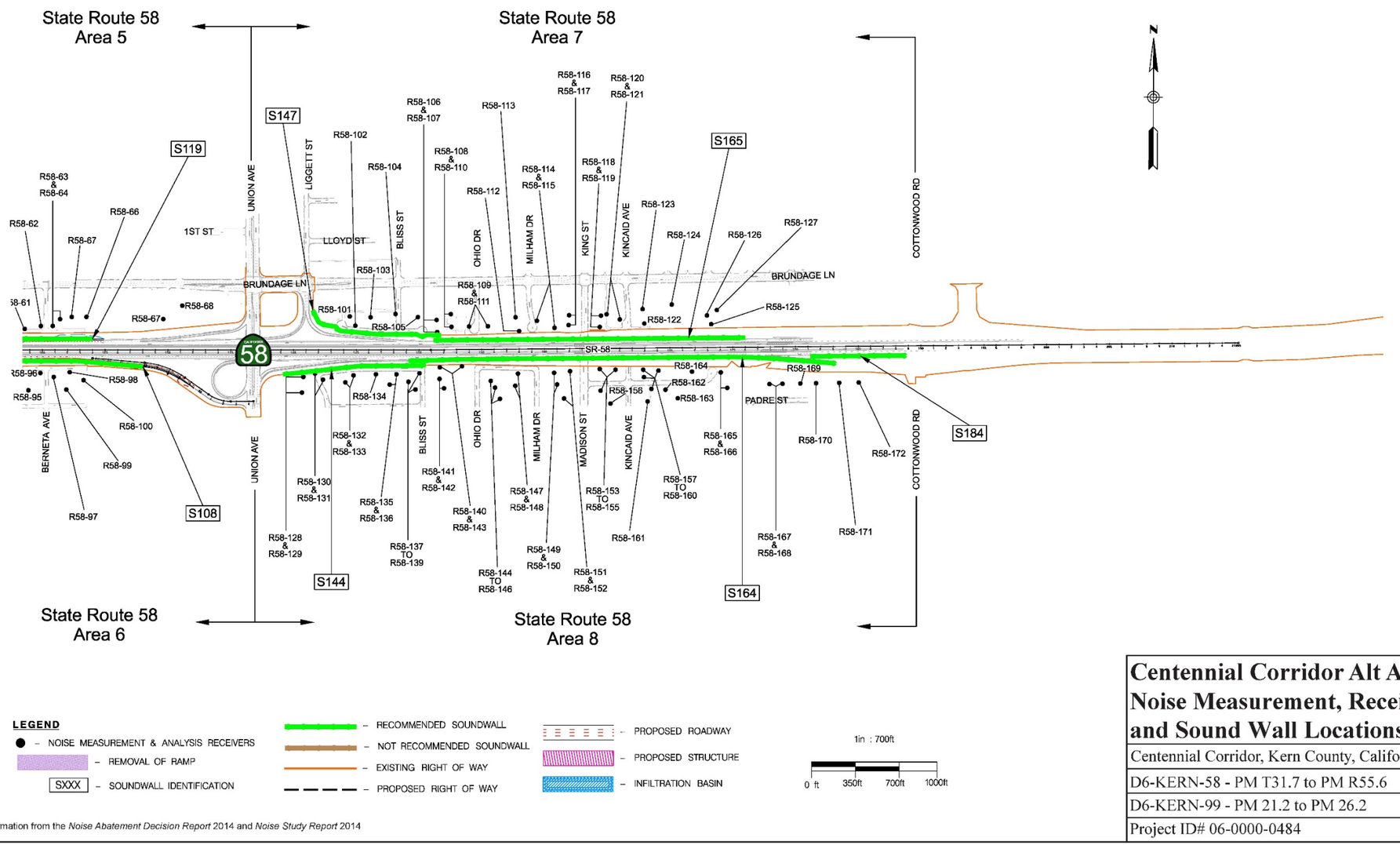
D6-KERN-58 - PM T31.7 to PM R55.6

D6-KERN-99 - PM 21.2 to PM 26.2

Project ID# 06-0000-0484

Caltrans

Figure 3-37



Source: Information from the *Noise Abatement Decision Report* 2014 and *Noise Study Report* 2014

Centennial Corridor Alt A Noise Measurement, Receiver, and Sound Wall Locations

Centennial Corridor, Kern County, California

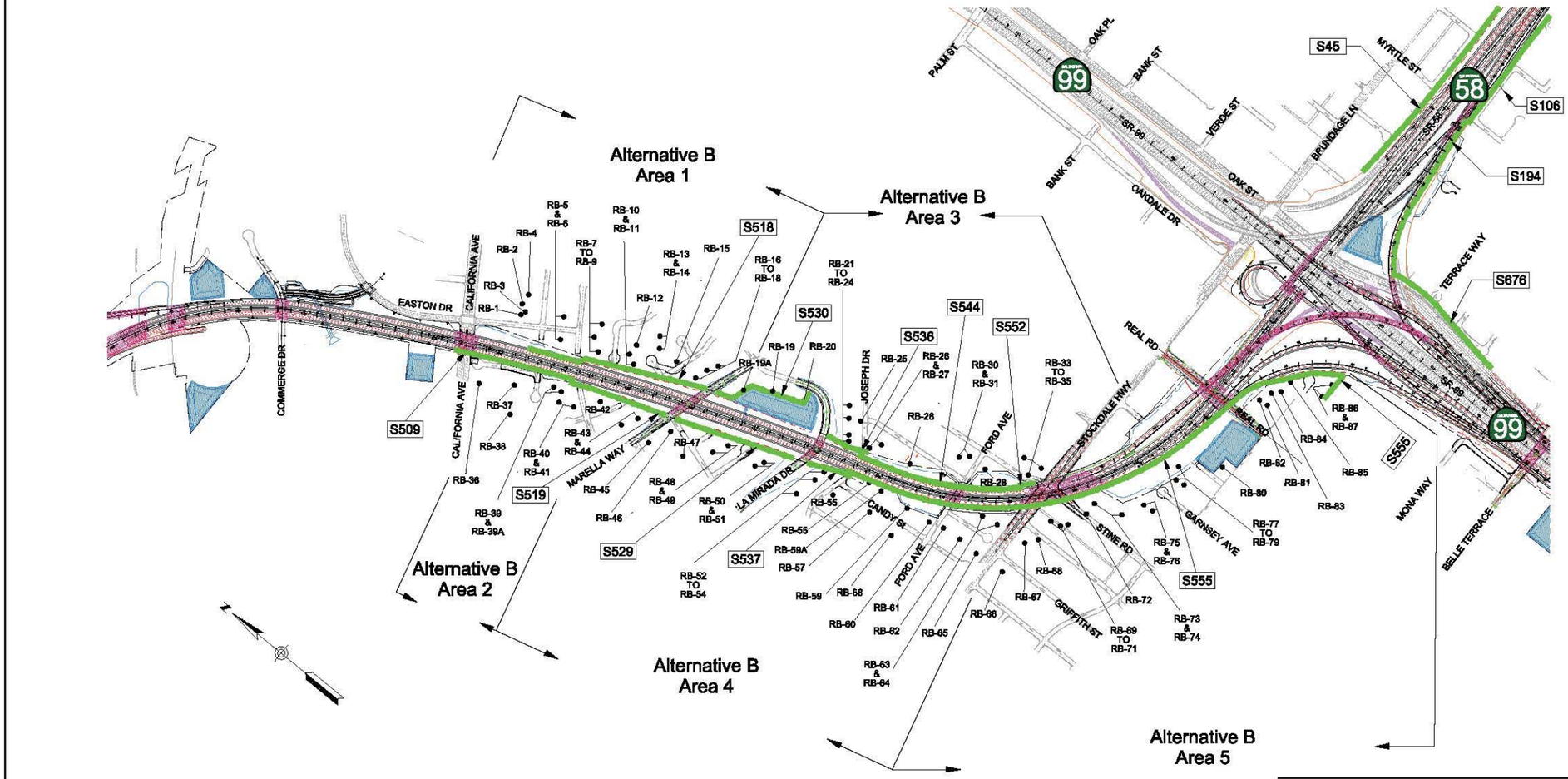
D6-KERN-58 - PM T31.7 to PM R55.6

D6-KERN-99 - PM 21.2 to PM 26.2

Project ID# 06-0000-0484

Caltrans

Figure 3-38



Source: Information from the *Noise Abatement Decision Report* 2014 and *Noise Study Report* 2014

Centennial Corridor Alt B (Preferred Alternative) Noise Measurement, Receiver, and Sound Wall Locations

Centennial Corridor, Kern County, California

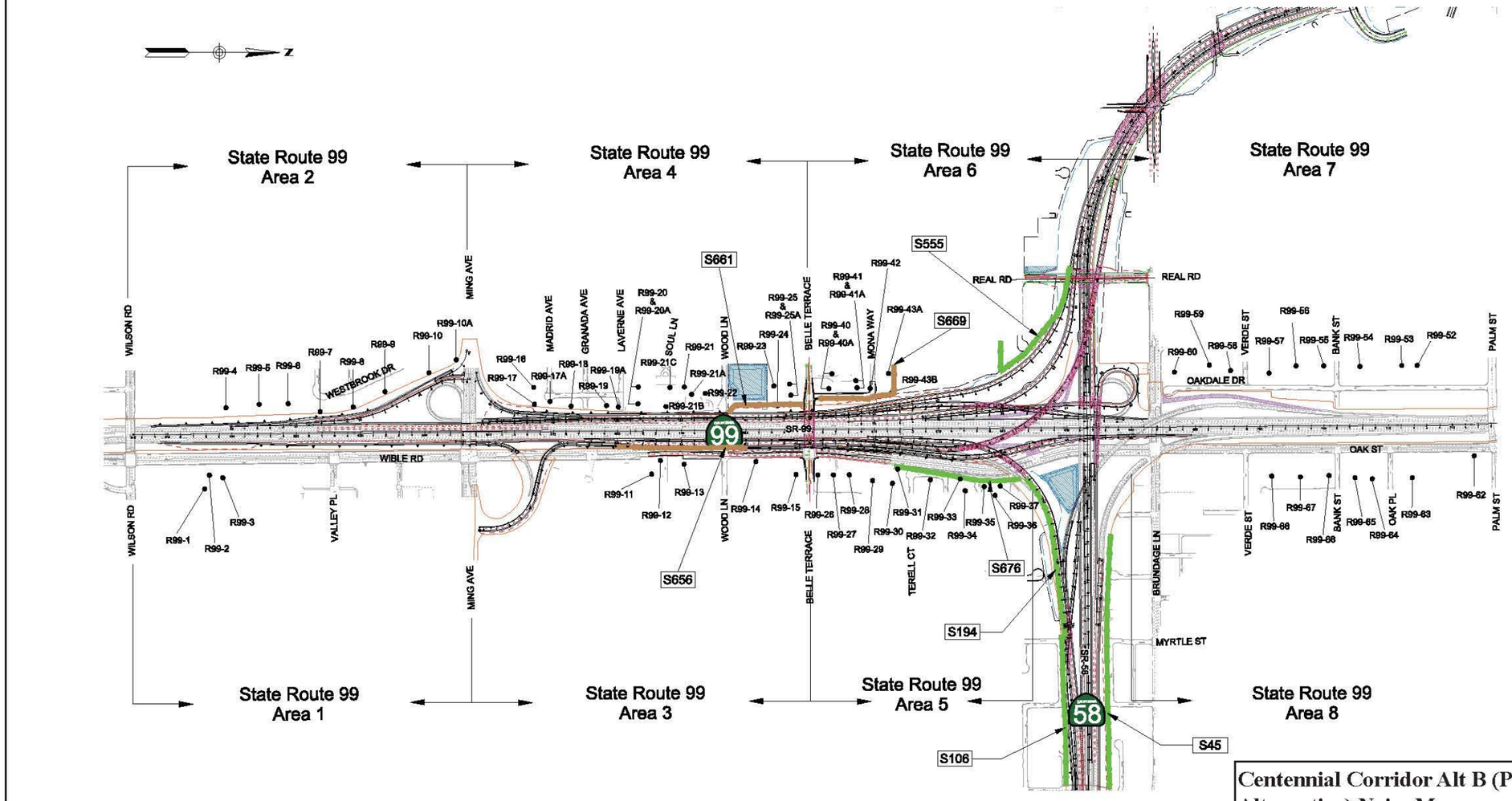
D6-KERN-58 - PM T31.7 to PM R55.6

D6-KERN-99 - PM 21.2 to PM 26.2

Project ID# 06-0000-0484

Caltrans

Figure 3-39



Source: Information from the *Noise Abatement Decision Report* 2014 and *Noise Study Report* 2014

Centennial Corridor Alt B (Preferred Alternative) Noise Measurement, Receiver, and Sound Wall Locations

Centennial Corridor, Kern County, California

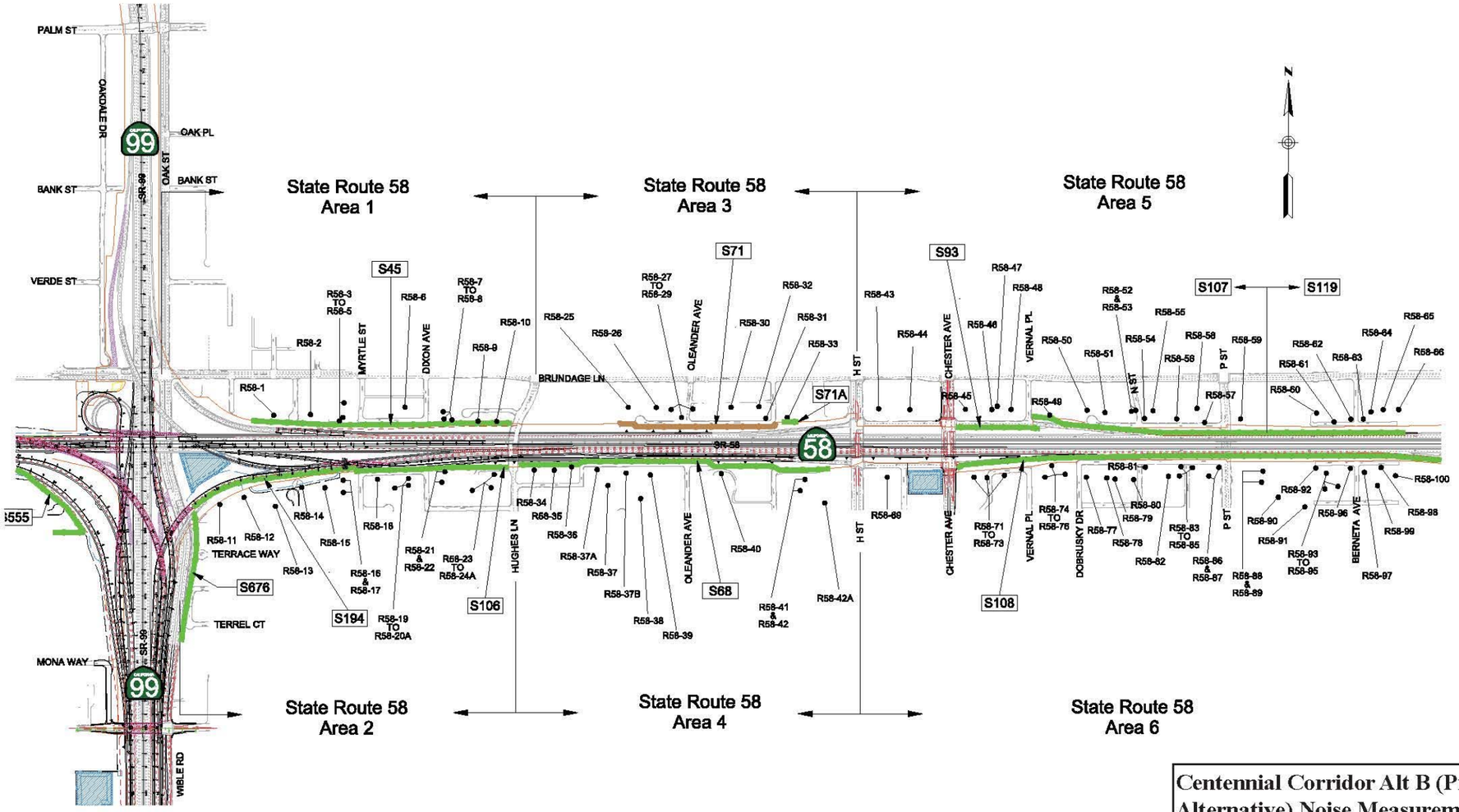
D6-KERN-58 - PM T31.7 to PM R55.6

D6-KERN-99 - PM 21.2 to PM 26.2

Project ID# 06-0000-0484

Caltrans

Figure 3-40



Source: Information from the *Noise Abatement Decision Report* 2014 and *Noise Study Report* 2014

Centennial Corridor Alt B (Preferred Alternative) Noise Measurement, Receiver, and Sound Wall Locations

Centennial Corridor, Kern County, California

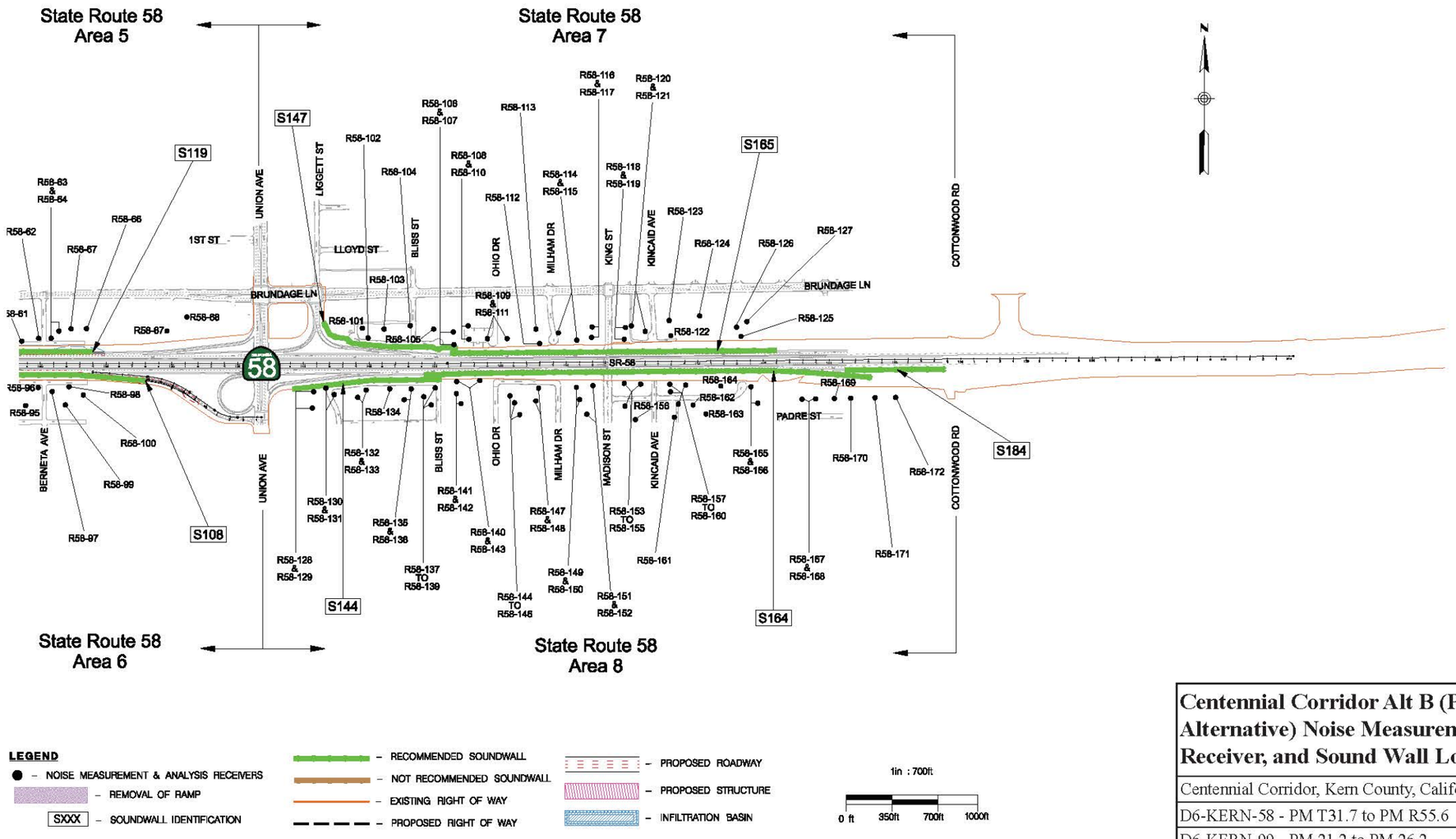
D6-KERN-58 - PM T31.7 to PM R55.6

D6-KERN-99 - PM 21.2 to PM 26.2

Project ID# 06-0000-0484

Caltrans

Figure 3-41



Source: Information from the *Noise Abatement Decision Report* 2014 and *Noise Study Report* 2014

Centennial Corridor Alt B (Preferred Alternative) Noise Measurement, Receiver, and Sound Wall Locations

Centennial Corridor, Kern County, California

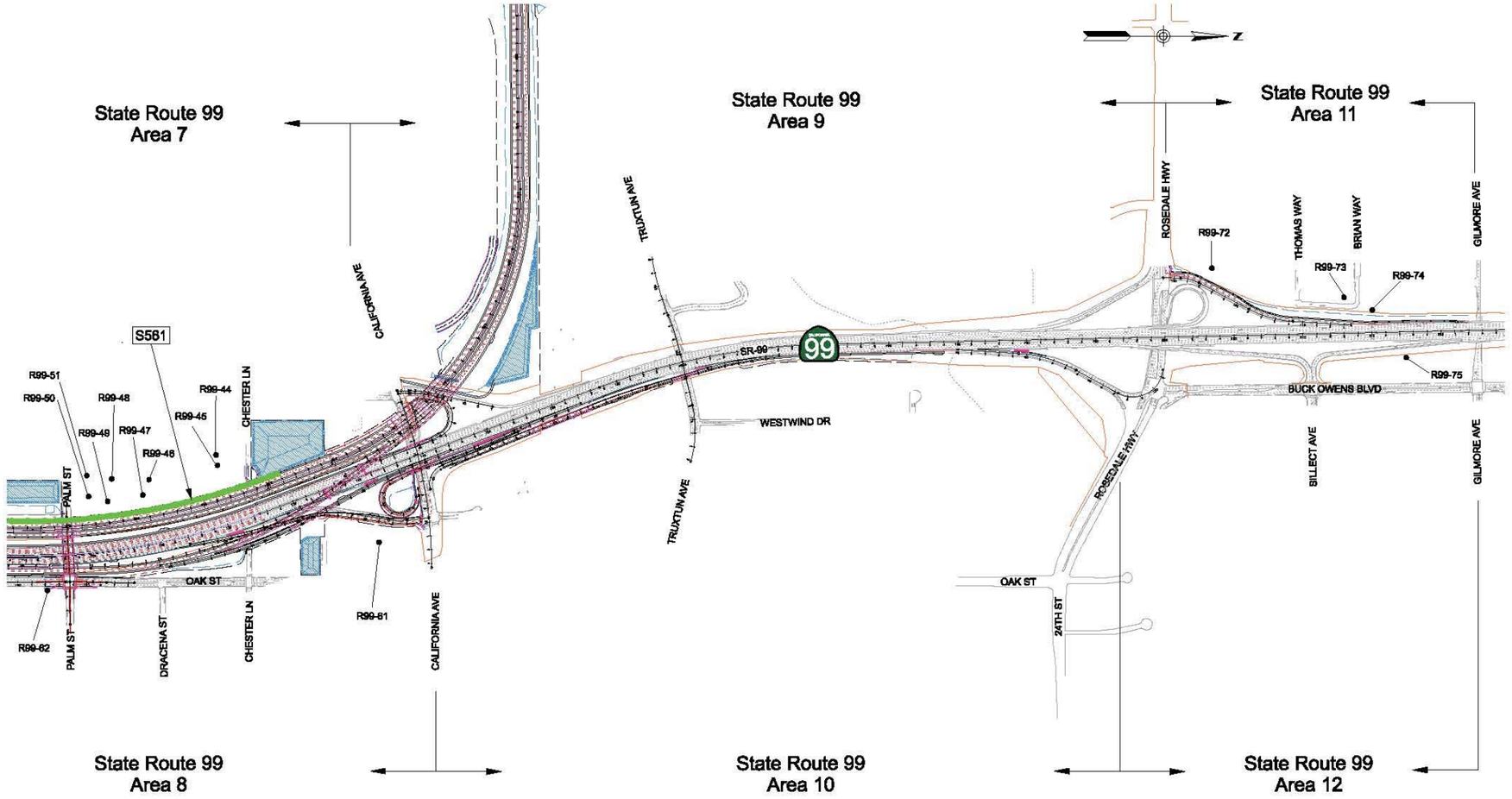
D6-KERN-58 - PM T31.7 to PM R55.6

D6-KERN-99 - PM 21.2 to PM 26.2

Project ID# 06-0000-0484

Caltrans

Figure 3-42



Source: Information from the *Noise Abatement Decision Report* 2014 and *Noise Study Report* 2014

Centennial Corridor Alt C
Noise Measurement, Receiver, and Sound Wall Locations

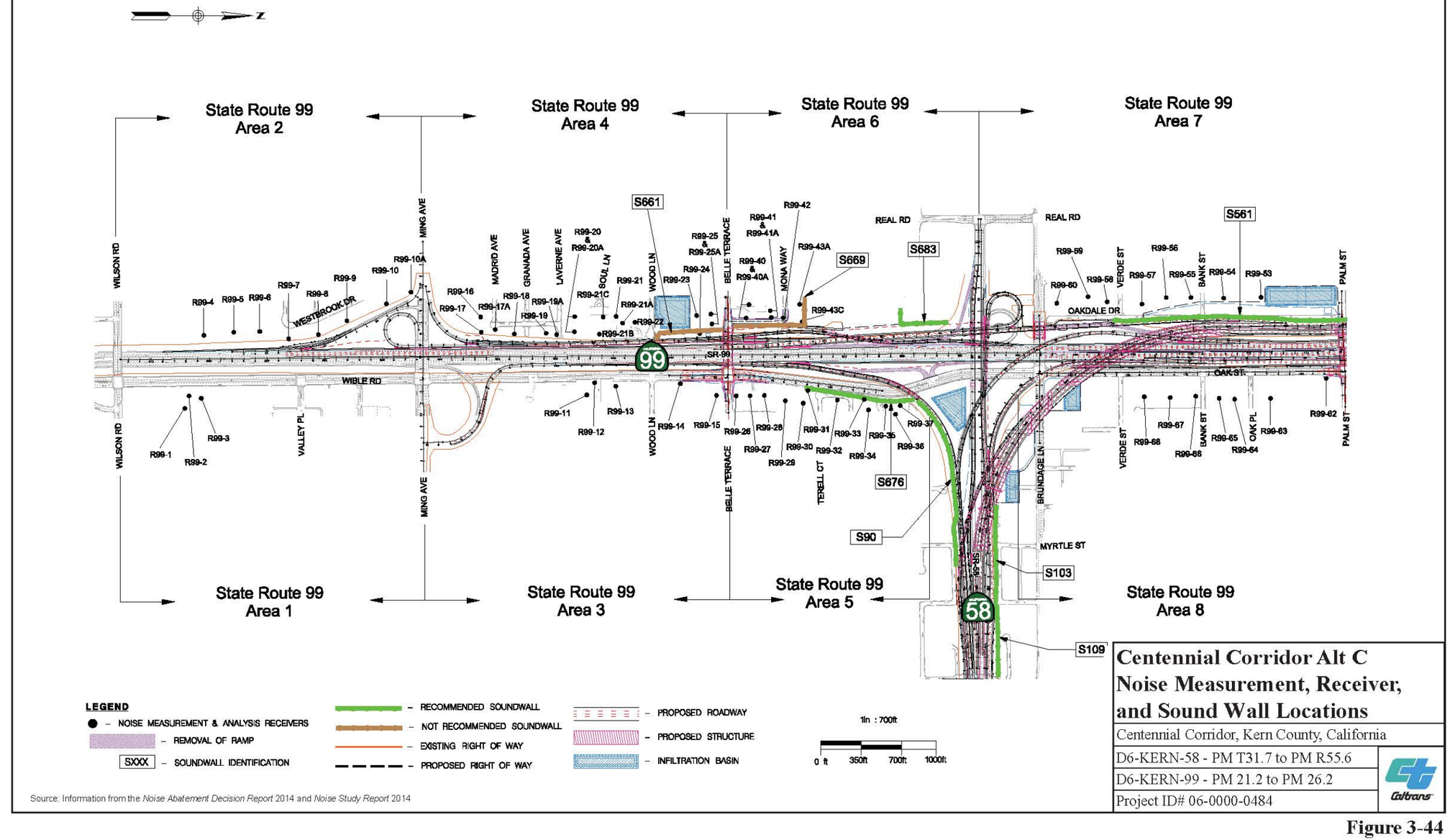
Centennial Corridor, Kern County, California

D6-KERN-58 - PM T31.7 to PM R55.6

D6-KERN-99 - PM 21.2 to PM 26.2

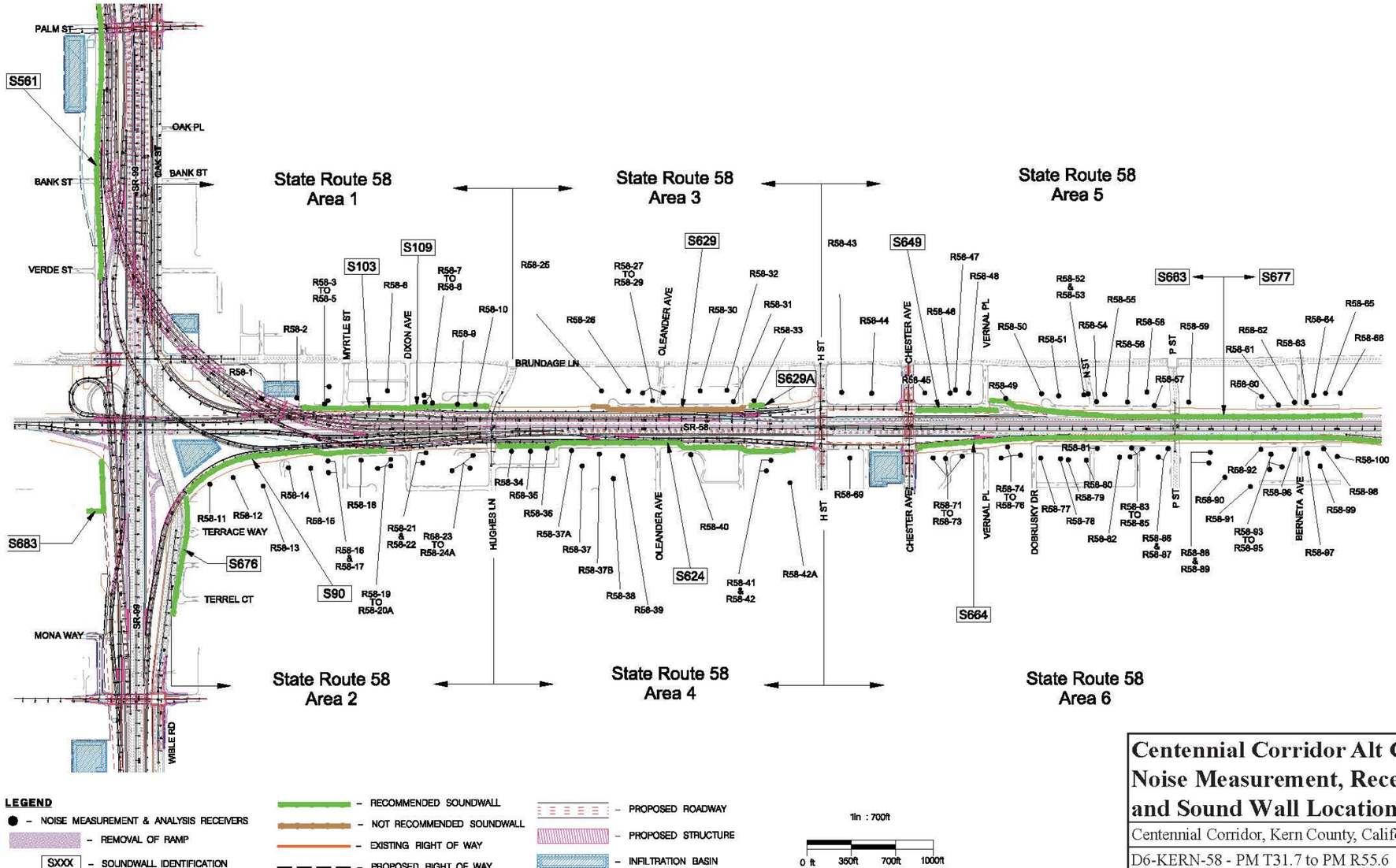
Project ID# 06-0000-0484

Figure 3-43



Source: Information from the *Noise Abatement Decision Report* 2014 and *Noise Study Report* 2014

Figure 3-44



Source: Information from the *Noise Abatement Decision Report* 2014 and *Noise Study Report* 2014

Centennial Corridor Alt C
Noise Measurement, Receiver, and Sound Wall Locations

Centennial Corridor, Kern County, California

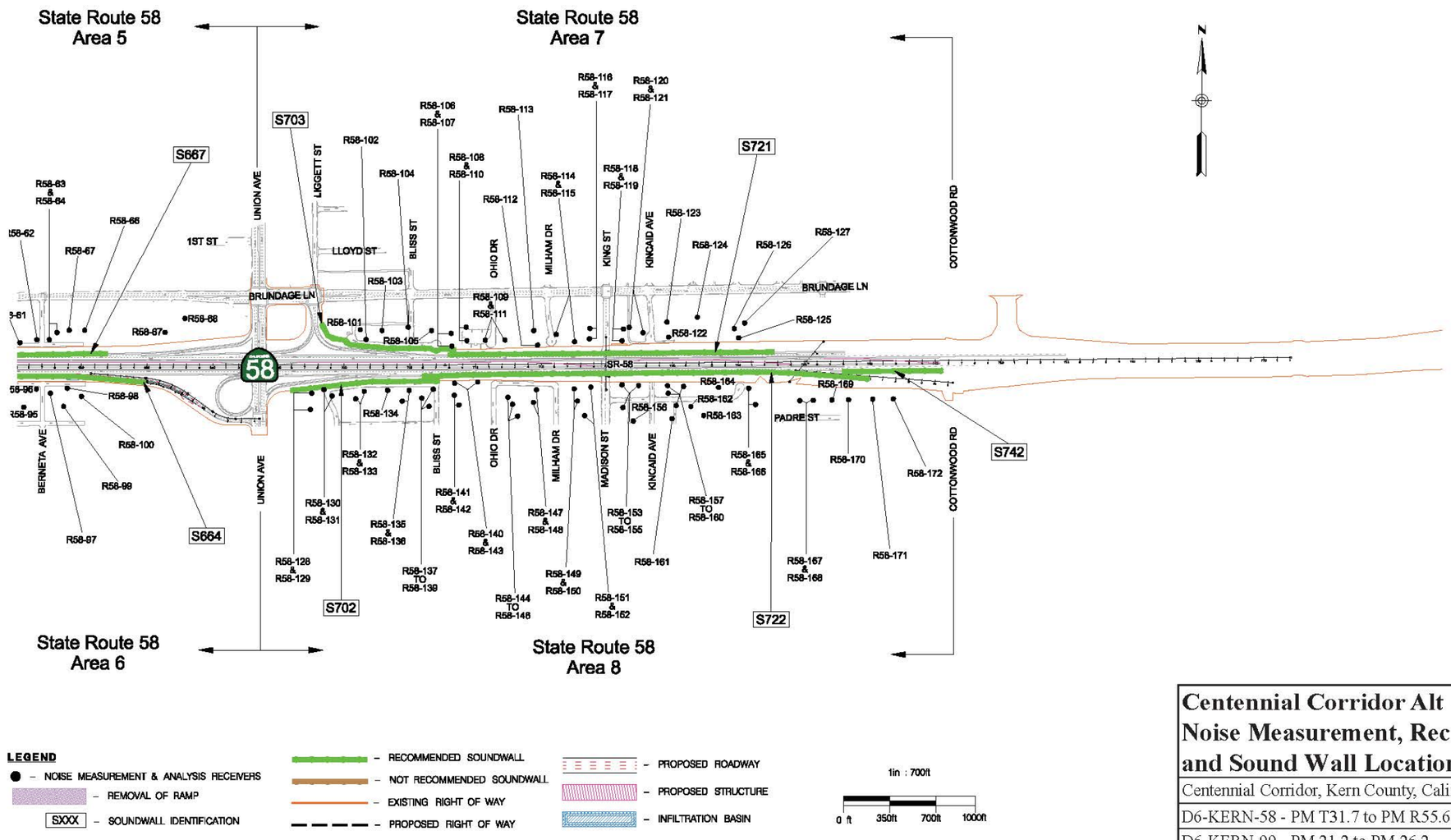
D6-KERN-58 - PM T31.7 to PM R55.6

D6-KERN-99 - PM 21.2 to PM 26.2

Project ID# 06-0000-0484

Caltrans

Figure 3-45



Source: Information from the *Noise Abatement Decision Report* 2014 and *Noise Study Report* 2014

Centennial Corridor Alt C
Noise Measurement, Receiver, and Sound Wall Locations

Centennial Corridor, Kern County, California

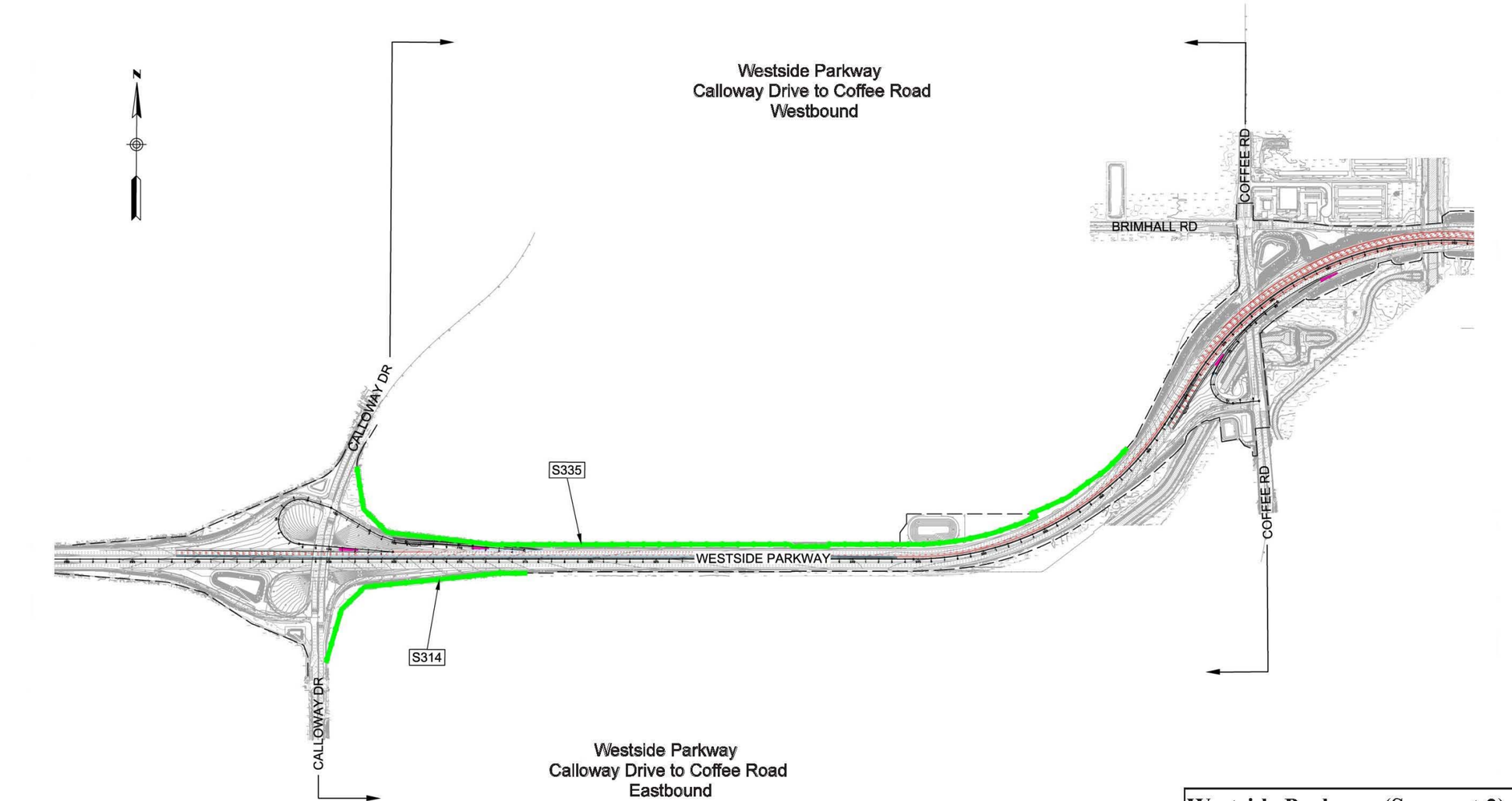
D6-KERN-58 - PM T31.7 to PM R55.6

D6-KERN-99 - PM 21.2 to PM 26.2

Project ID# 06-0000-0484

Caltrans

Figure 3-46



Source: Information from the *Noise Abatement Decision Report* 2014 and *Noise Study Report* 2014

Westside Parkway (Segment 2)
Sound Wall Locations

Centennial Corridor, Kern County, California

D6-KERN-58 - PM T31.7 to PM R55.6

D6-KERN-99 - PM 21.2 to PM 26.2

Project ID# 06-0000-0484

Caltrans

Figure 3-47

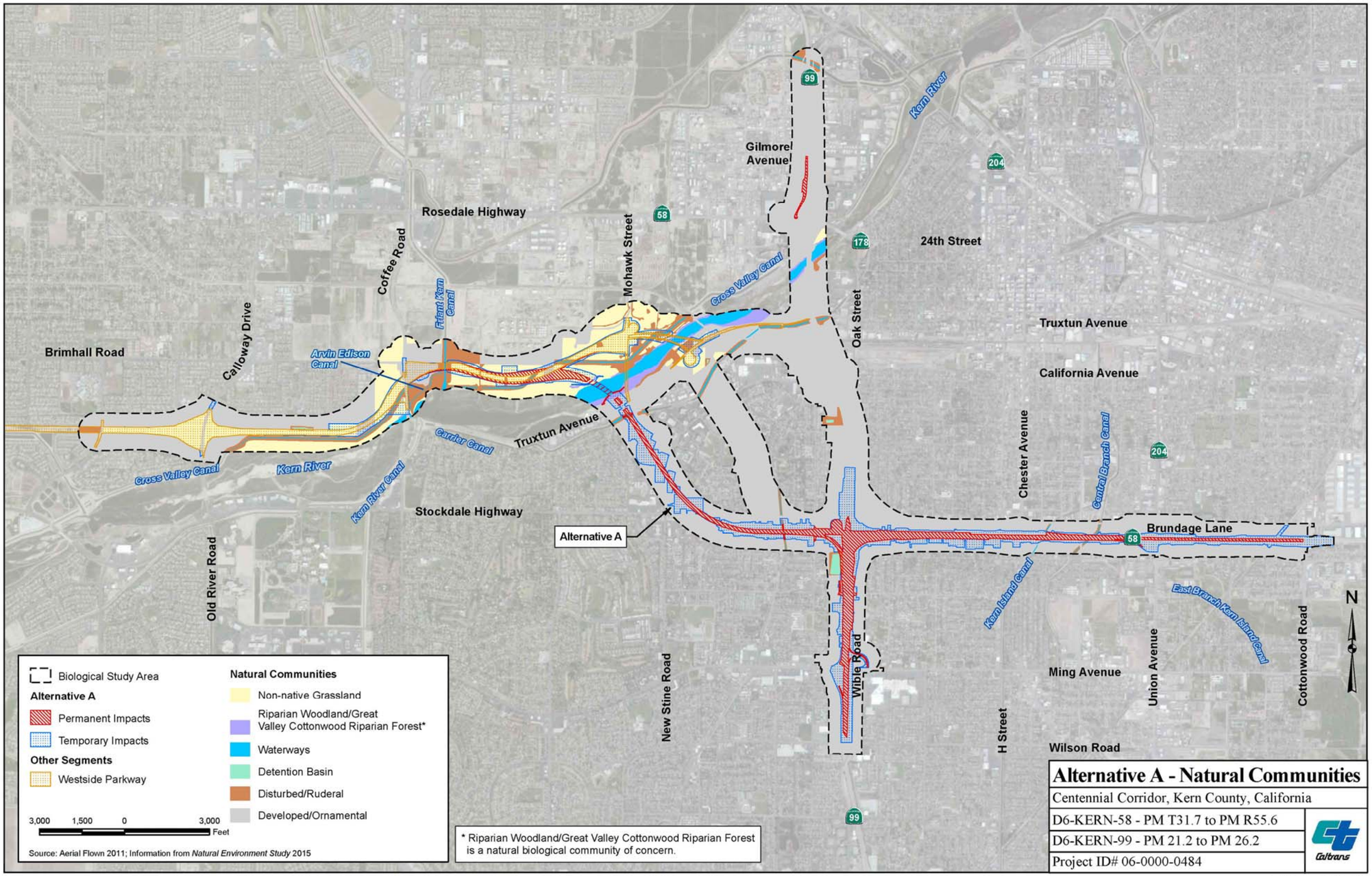

Rosedale Highway
Gilmore Avenue
Kern River
24th Street
Truxtun Avenue
California Avenue
Brimhall Road
Calloway Drive
Coffee Road
Friant-Kern Canal
Mohawk Street
Cross Valley Canal
Oak Street
Arvin Edison Canal
Carrier Canal
Truxtun Avenue
Cross Valley Canal
Kern River
Kern River Canal
Stockdale Highway
Alternative A
Chester Avenue
Central Branch Canal
Brundage Lane
Old River Road
Kern Island Canal
East Branch Kern Island Canal
Cottonwood Road
New Stine Road
Wible Road
Ming Avenue
Union Avenue
H Street
Wilson Road
N
Biological Study Area
Alternative A
Permanent Impacts
Temporary Impacts
Other Segments
Westside Parkway
Natural Communities
Non-native Grassland
Riparian Woodland/Great Valley Cottonwood Riparian Forest*
Waterways
Detention Basin
Disturbed/Ruderal
Developed/Ornamental
3,000 1,500 0 3,000 Feet
Source: Aerial Flown 2011; Information from Natural Environment Study 2015
* Riparian Woodland/Great Valley Cottonwood Riparian Forest is a natural biological community of concern.
Alternative A - Natural Communities
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 3-48

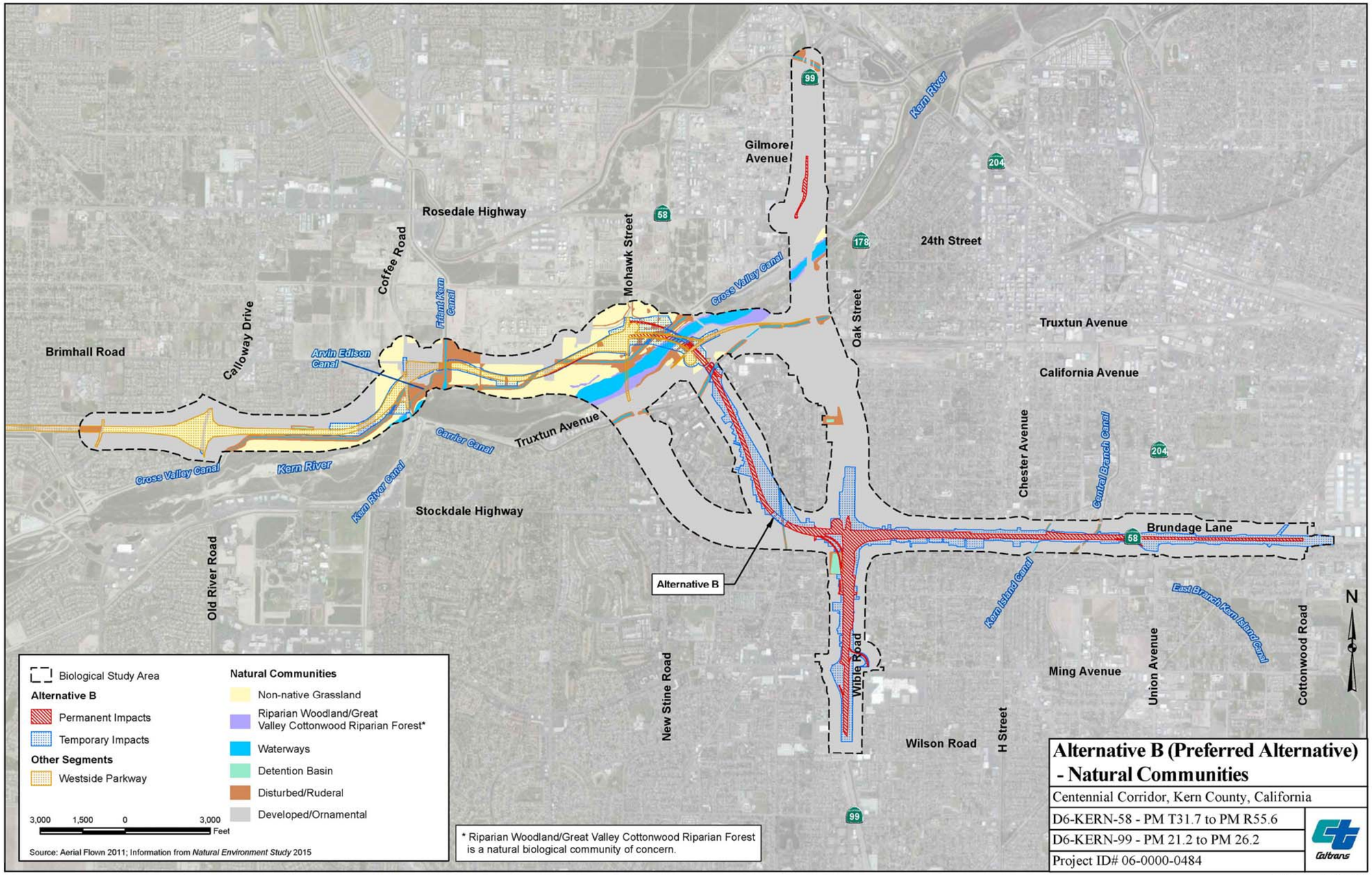

Gilmore Avenue
Kern River
Rosedale Highway
Coffee Road
Mohawk Street
Cross Valley Canal
24th Street
Oak Street
Truxtun Avenue
Brimhall Road
Calloway Drive
Arvin Edison Canal
Friant-Kern Canal
California Avenue
Carrier Canal
Truxtun Avenue
Chester Avenue
Central Branch Canal
Cross Valley Canal
Kern River
Kern River Canal
Stockdale Highway
Brundage Lane
Alternative B
Old River Road
Kern Island Canal
East Branch Kern Island Canal
Cottonwood Road
New Stine Road
Wible Road
Ming Avenue
Union Avenue
Wilson Road
H Street
N
Biological Study Area
Alternative B
Permanent Impacts
Temporary Impacts
Other Segments
Westside Parkway
Natural Communities
Non-native Grassland
Riparian Woodland/Great Valley Cottonwood Riparian Forest*
Waterways
Detention Basin
Disturbed/Ruderal
Developed/Ornamental
3,000 1,500 0 3,000 Feet
Source: Aerial Flown 2011; Information from Natural Environment Study 2015
* Riparian Woodland/Great Valley Cottonwood Riparian Forest is a natural biological community of concern.
Alternative B (Preferred Alternative) - Natural Communities
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 3-49

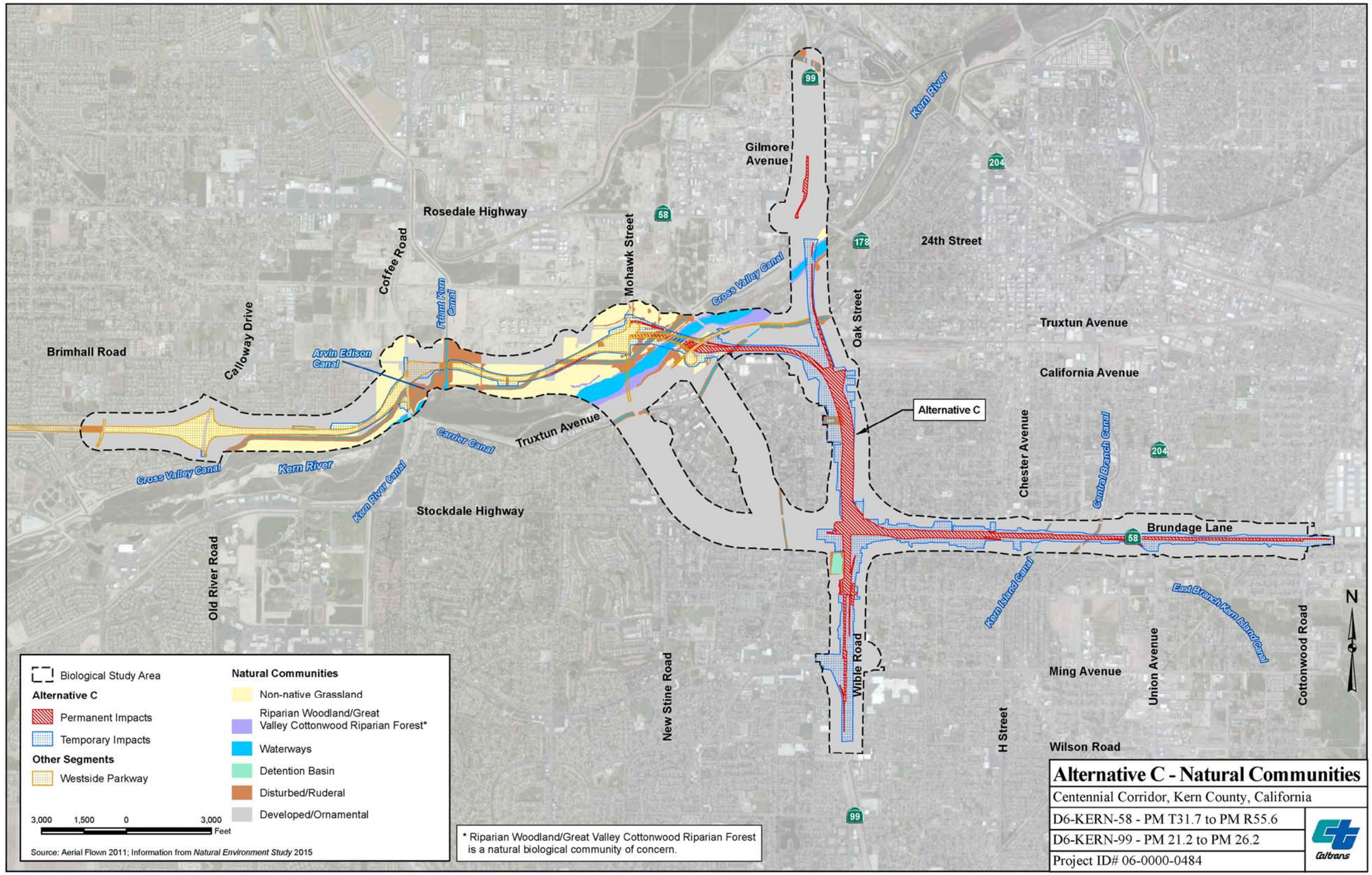

Gilmore Avenue
Kern River
Rosedale Highway
Coffee Road
Mohawk Street
Cross Valley Canal
24th Street
Oak Street
Truxtun Avenue
California Avenue
Brimhall Road
Calloway Drive
Arvin Edison Canal
Friant-Kern Canal
Alternative C
Carrier Canal
Truxtun Avenue
Cross Valley Canal
Kern River
Kern River Canal
Stockdale Highway
Chester Avenue
Central Branch Canal
Brundage Lane
Old River Road
Kern Island Canal
East Branch Kern Island Canal
New Stine Road
Wible Road
Ming Avenue
Union Avenue
Cottonwood Road
H Street
Wilson Road
N
Biological Study Area
Alternative C
Permanent Impacts
Temporary Impacts
Other Segments
Westside Parkway
Natural Communities
Non-native Grassland
Riparian Woodland/Great Valley Cottonwood Riparian Forest*
Waterways
Detention Basin
Disturbed/Ruderal
Developed/Ornamental
3,000 1,500 0 3,000
Feet
Source: Aerial Flown 2011; Information from Natural Environment Study 2015
* Riparian Woodland/Great Valley Cottonwood Riparian Forest is a natural biological community of concern.
Alternative C - Natural Communities
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 3-50

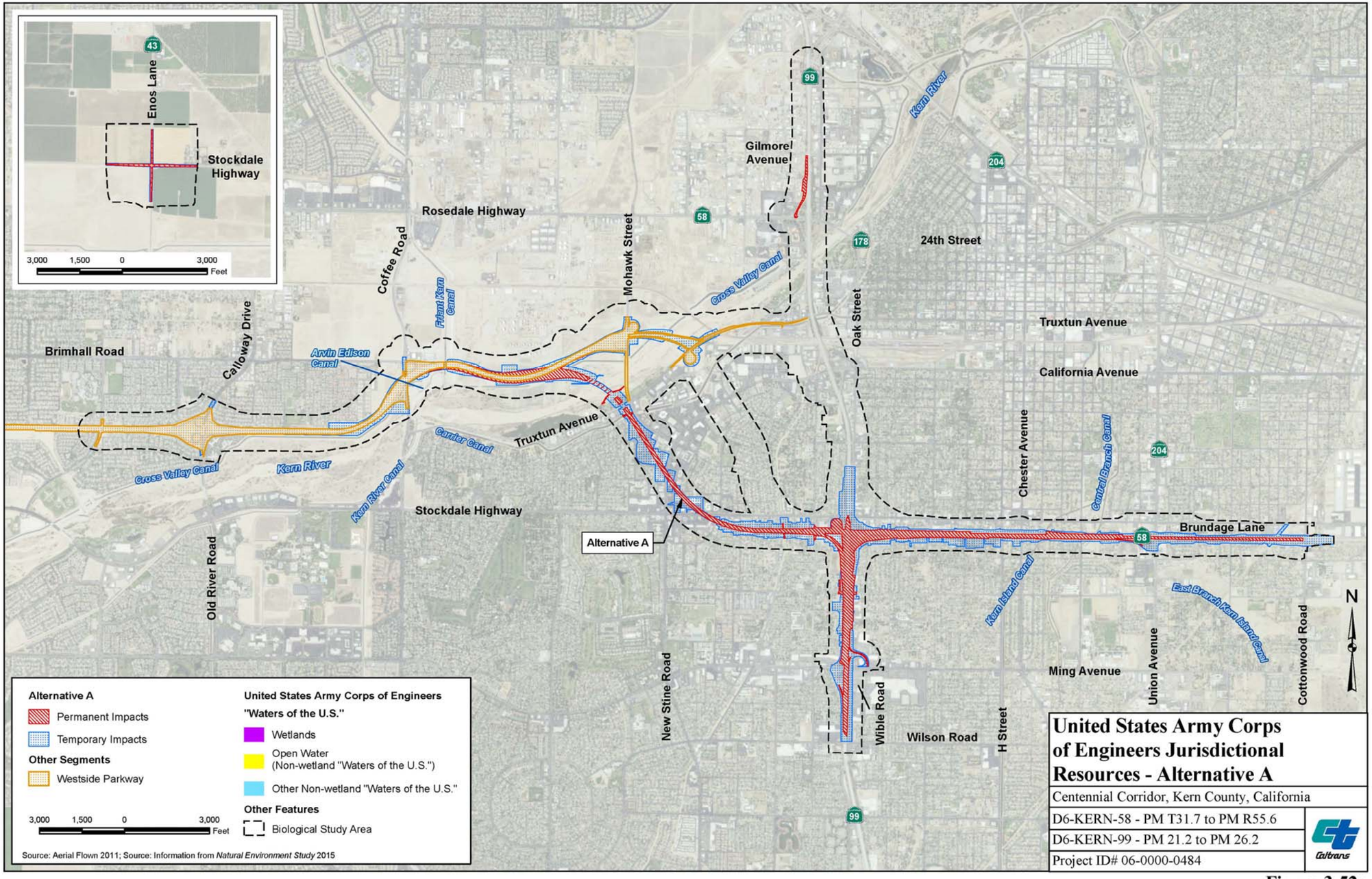

Enos Lane
Stockdale Highway
3,000 1,500 0 3,000 Feet
Rosedale Highway
Coffee Road
Friant-Kern Canal
Mohawk Street
Gilmore Avenue
Cross Valley Canal
Oak Street
24th Street
Truxtun Avenue
California Avenue
Kern River
Brimhall Road
Calloway Drive
Arvin Edison Canal
Carrier Canal
Truxtun Avenue
Cross Valley Canal
Kern River
Kern River Canal
Stockdale Highway
Alternative A
Old River Road
Chester Avenue
Central Branch Canal
Brundage Lane
Kern Island Canal
East Branch Kern Island Canal
Cottonwood Road
Union Avenue
Ming Avenue
New Stine Road
Wible Road
Wilson Road
H Street
N
Alternative A
Permanent Impacts
Temporary Impacts
Other Segments
Westside Parkway
3,000 1,500 0 3,000 Feet
United States Army Corps of Engineers
"Waters of the U.S."
Wetlands
Open Water
(Non-wetland "Waters of the U.S.")
Other Non-wetland "Waters of the U.S."
Other Features
Biological Study Area
Source: Aerial Flown 2011; Source: Information from Natural Environment Study 2015
United States Army Corps of Engineers Jurisdictional Resources - Alternative A
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 3-52a

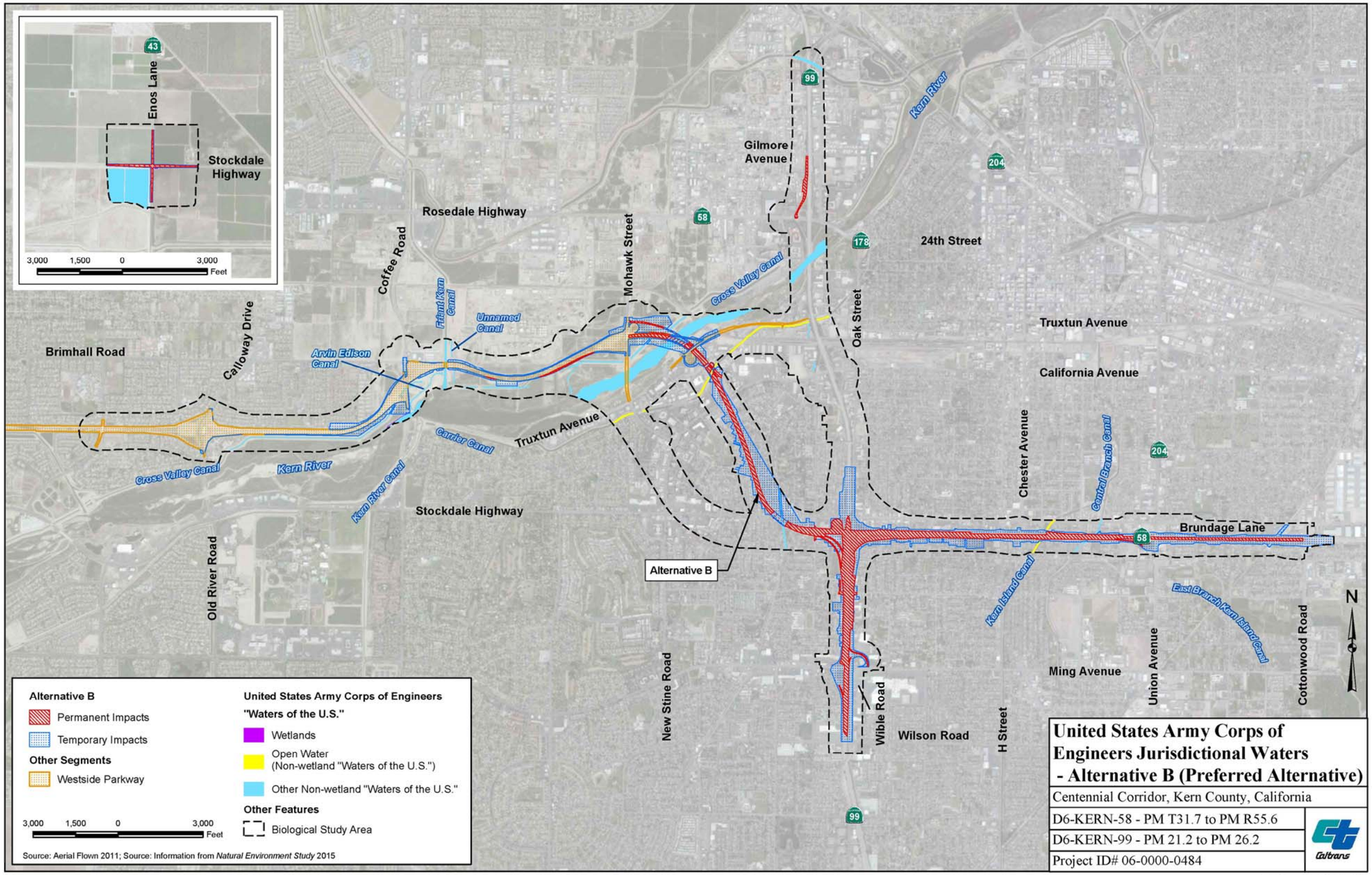

Enos Lane
Stockdale Highway
3,000 1,500 0 3,000 Feet
Rosedale Highway
Coffee Road
Mohawk Street
Gilmore Avenue
Kern River
24th Street
Oak Street
Truxtun Avenue
California Avenue
Chester Avenue
Brundage Lane
Brimhall Road
Calloway Drive
Arvin Edison Canal
Friant-Kern Canal
Unnamed Canal
Cross Valley Canal
Carrier Canal
Kern River Canal
Central Branch Canal
East Branch Kern Island Canal
Kern Island Canal
Old River Road
New Stine Road
Wible Road
Wilson Road
H Street
Union Avenue
Ming Avenue
Cottonwood Road
Alternative B
N
Alternative B
Permanent Impacts
Temporary Impacts
Other Segments
Westside Parkway
United States Army Corps of Engineers "Waters of the U.S."
Wetlands
Open Water (Non-wetland "Waters of the U.S.")
Other Non-wetland "Waters of the U.S."
Other Features
Biological Study Area
3,000 1,500 0 3,000 Feet
Source: Aerial Flown 2011; Source: Information from Natural Environment Study 2015
United States Army Corps of Engineers Jurisdictional Waters - Alternative B (Preferred Alternative)
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 3-52b

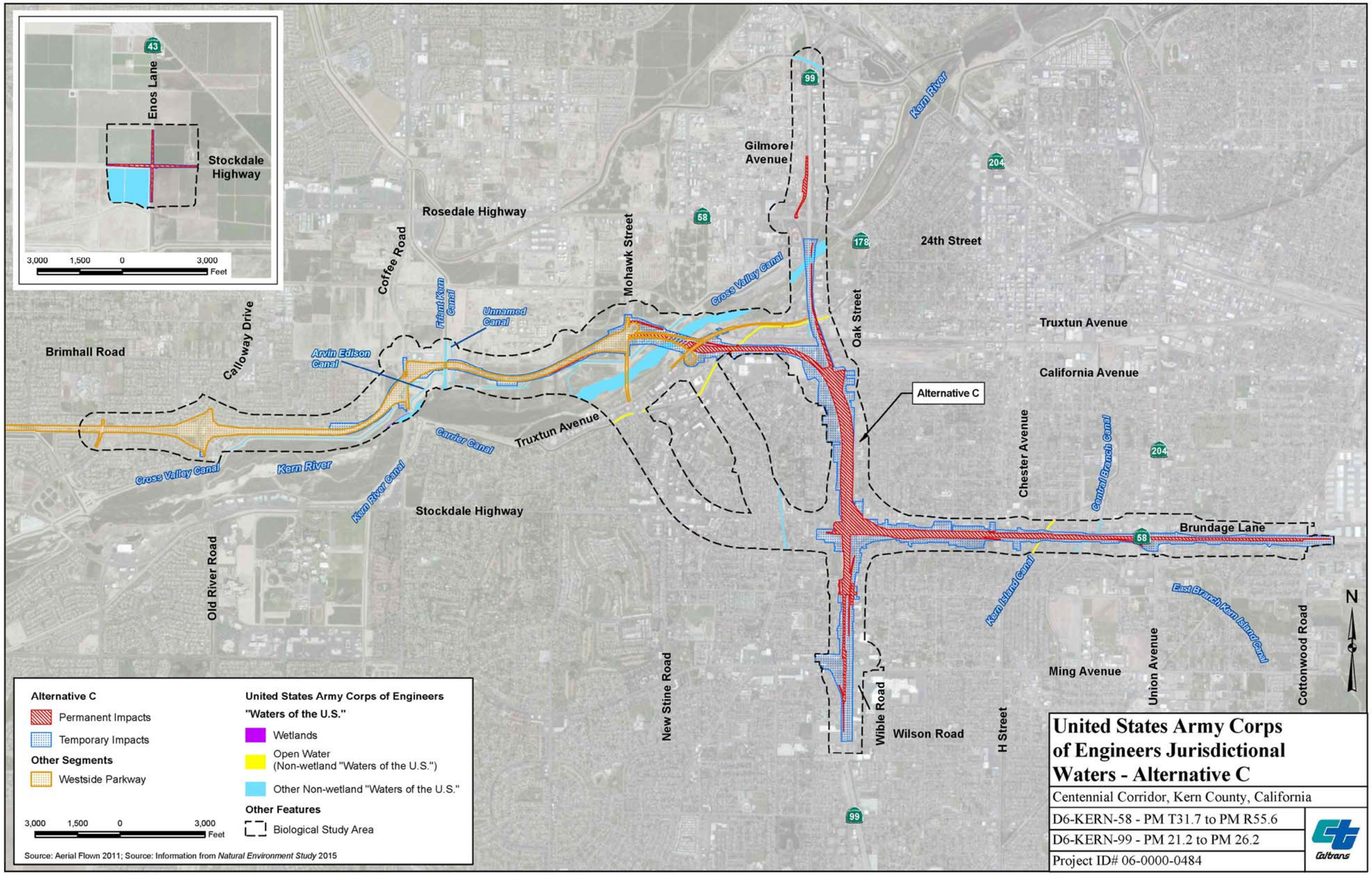

Enos Lane
Stockdale Highway
3,000 1,500 0 3,000 Feet
Rosedale Highway
Coffee Road
Mohawk Street
Gilmore Avenue
Kern River
24th Street
Oak Street
Truxtun Avenue
California Avenue
Chester Avenue
Brundage Lane
Cross Valley Canal
Friant-Kern Canal
Unnamed Canal
Arvin Edison Canal
Calloway Drive
Brimhall Road
Carrier Canal
Kern River Canal
Stockdale Highway
Old River Road
Alternative C
Kern Island Canal
East Branch Kern Island Canal
Cottonwood Road
Ming Avenue
Union Avenue
New Stine Road
Wible Road
Wilson Road
H Street
N
Alternative C
Permanent Impacts
Temporary Impacts
Other Segments
Westside Parkway
United States Army Corps of Engineers
"Waters of the U.S."
Wetlands
Open Water
(Non-wetland "Waters of the U.S.")
Other Non-wetland "Waters of the U.S."
Other Features
Biological Study Area
3,000 1,500 0 3,000 Feet
Source: Aerial Flown 2011; Source: Information from Natural Environment Study 2015
United States Army Corps of Engineers Jurisdictional Waters - Alternative C
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 3-52c

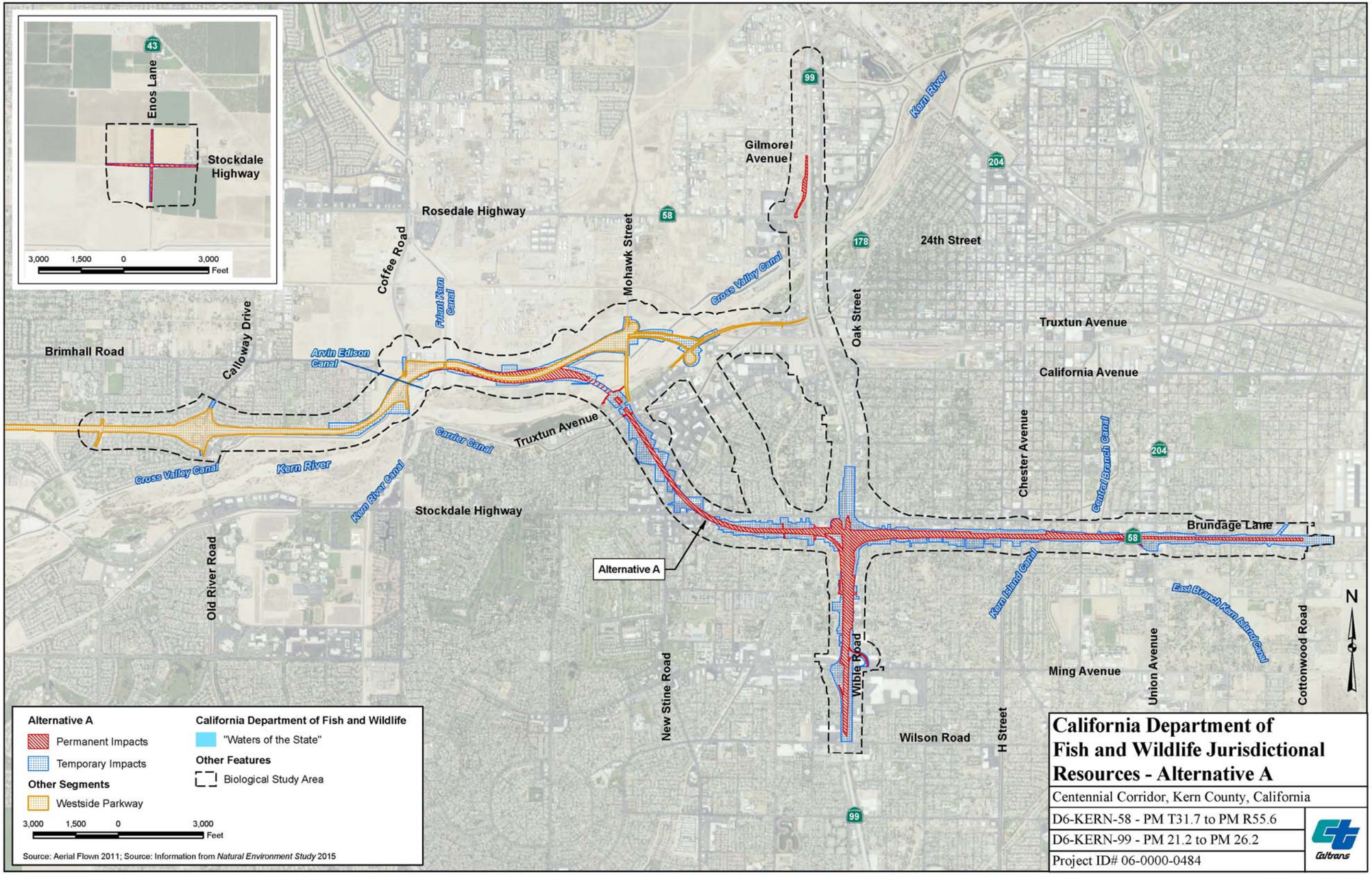

Enos Lane
Stockdale Highway
3,000 1,500 0 3,000 Feet
Rosedale Highway
Coffee Road
Friant-Kern Canal
Mohawk Street
Cross Valley Canal
Gilmore Avenue
Kern River
24th Street
Oak Street
Truxtun Avenue
California Avenue
Brimhall Road
Calloway Drive
Arvin Edison Canal
Carrier Canal
Truxtun Avenue
Cross Valley Canal
Kern River
Kern River Canal
Stockdale Highway
Old River Road
Alternative A
Chester Avenue
Central Branch Canal
Brundage Lane
Kern Island Canal
East Branch Kern Island Canal
Cottonwood Road
Union Avenue
Ming Avenue
New Stine Road
Wible Road
Wilson Road
H Street
N
Alternative A
Permanent Impacts
Temporary Impacts
Other Segments
Westside Parkway
California Department of Fish and Wildlife
"Waters of the State"
Other Features
Biological Study Area
3,000 1,500 0 3,000 Feet
Source: Aerial Flown 2011; Source: Information from Natural Environment Study 2015
California Department of Fish and Wildlife Jurisdictional Resources - Alternative A
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 3-53a

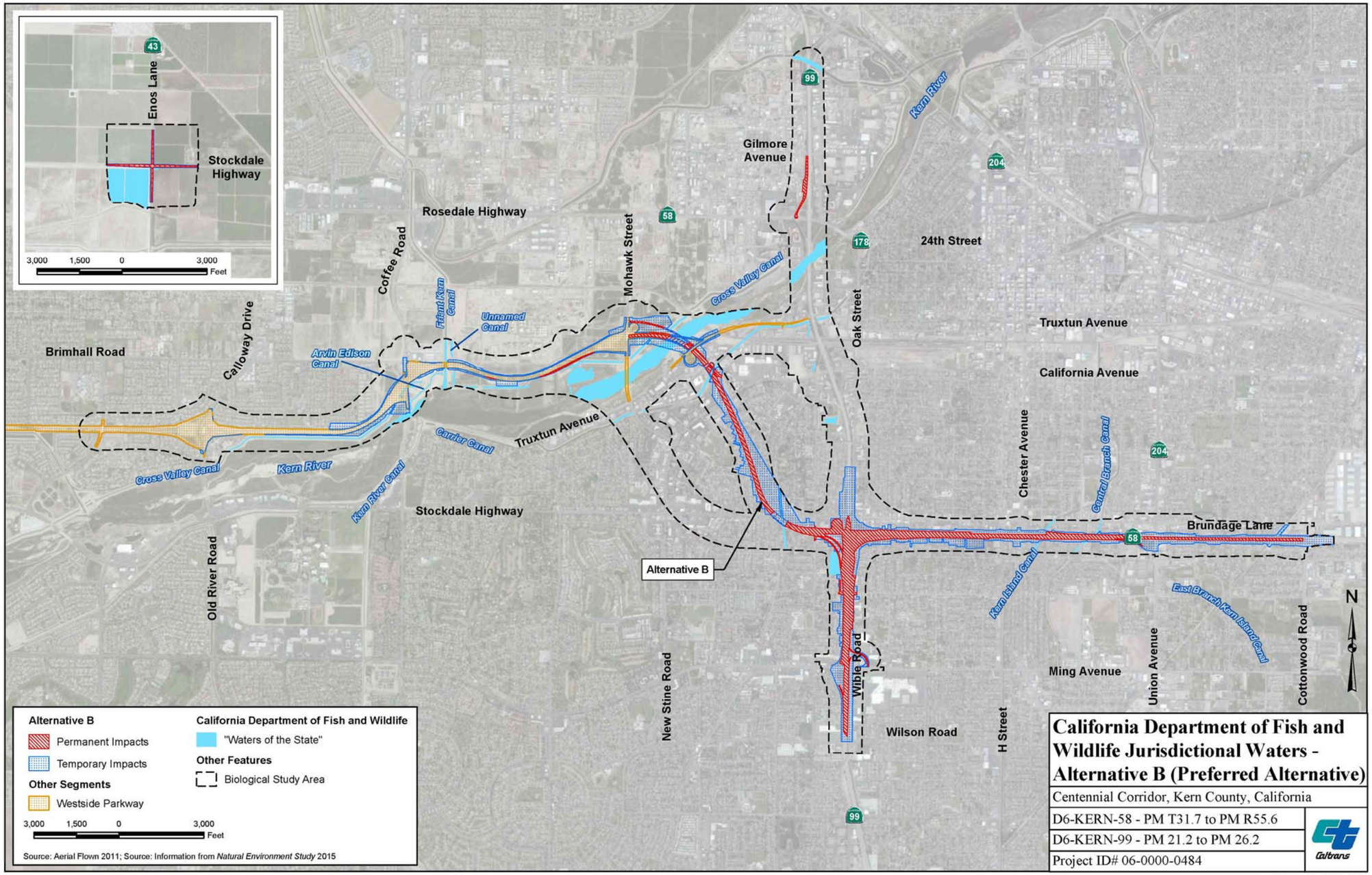

Enos Lane
Stockdale Highway
3,000 1,500 0 3,000 Feet
Rosedale Highway
Coffee Road
Mohawk Street
Gilmore Avenue
Kern River
24th Street
Oak Street
Truxtun Avenue
California Avenue
Chester Avenue
Brundage Lane
Ming Avenue
Union Avenue
Cottonwood Road
Brimhall Road
Calloway Drive
Arvin Edison Canal
Friant-Kern Canal
Unnamed Canal
Cross Valley Canal
Carrier Canal
Kern River Canal
Old River Road
New Stine Road
Wible Road
Wilson Road
H Street
Kern Island Canal
East Branch Kern Island Canal
Central Branch Canal
Alternative B
N
Alternative B
Permanent Impacts
Temporary Impacts
Other Segments
Westside Parkway
California Department of Fish and Wildlife
"Waters of the State"
Other Features
Biological Study Area
3,000 1,500 0 3,000 Feet
Source: Aerial Flown 2011; Source: Information from Natural Environment Study 2015
California Department of Fish and Wildlife Jurisdictional Waters - Alternative B (Preferred Alternative)
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 3-53b

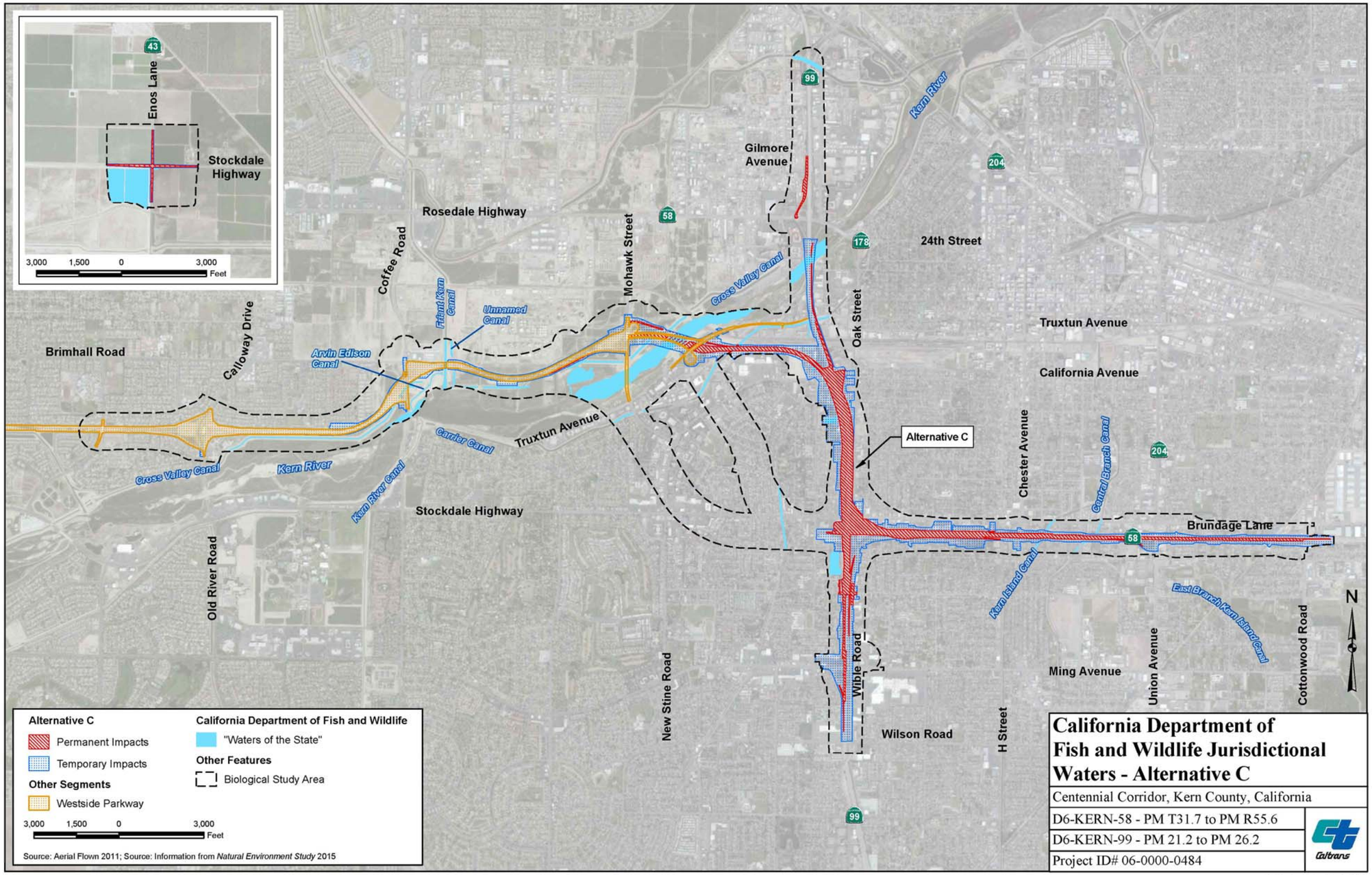

Enos Lane
Stockdale Highway
3,000 1,500 0 3,000
Feet
Rosedale Highway
Coffee Road
Mohawk Street
Gilmore Avenue
Kern River
24th Street
Oak Street
Truxtun Avenue
California Avenue
Chester Avenue
Brundage Lane
Brimhall Road
Calloway Drive
Arvin Edison Canal
Friant-Kern Canal
Unnamed Canal
Cross Valley Canal
Carrier Canal
Kern River Canal
Stockdale Highway
Old River Road
New Stine Road
Wible Road
Wilson Road
H Street
Kern Island Canal
East Branch Kern Island Canal
Union Avenue
Ming Avenue
Cottonwood Road
Alternative C
N
Alternative C
Permanent Impacts
Temporary Impacts
Other Segments
Westside Parkway
California Department of Fish and Wildlife
"Waters of the State"
Other Features
Biological Study Area
3,000 1,500 0 3,000
Feet
Source: Aerial Flown 2011; Source: Information from Natural Environment Study 2015
California Department of Fish and Wildlife Jurisdictional Waters - Alternative C
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 3-53c

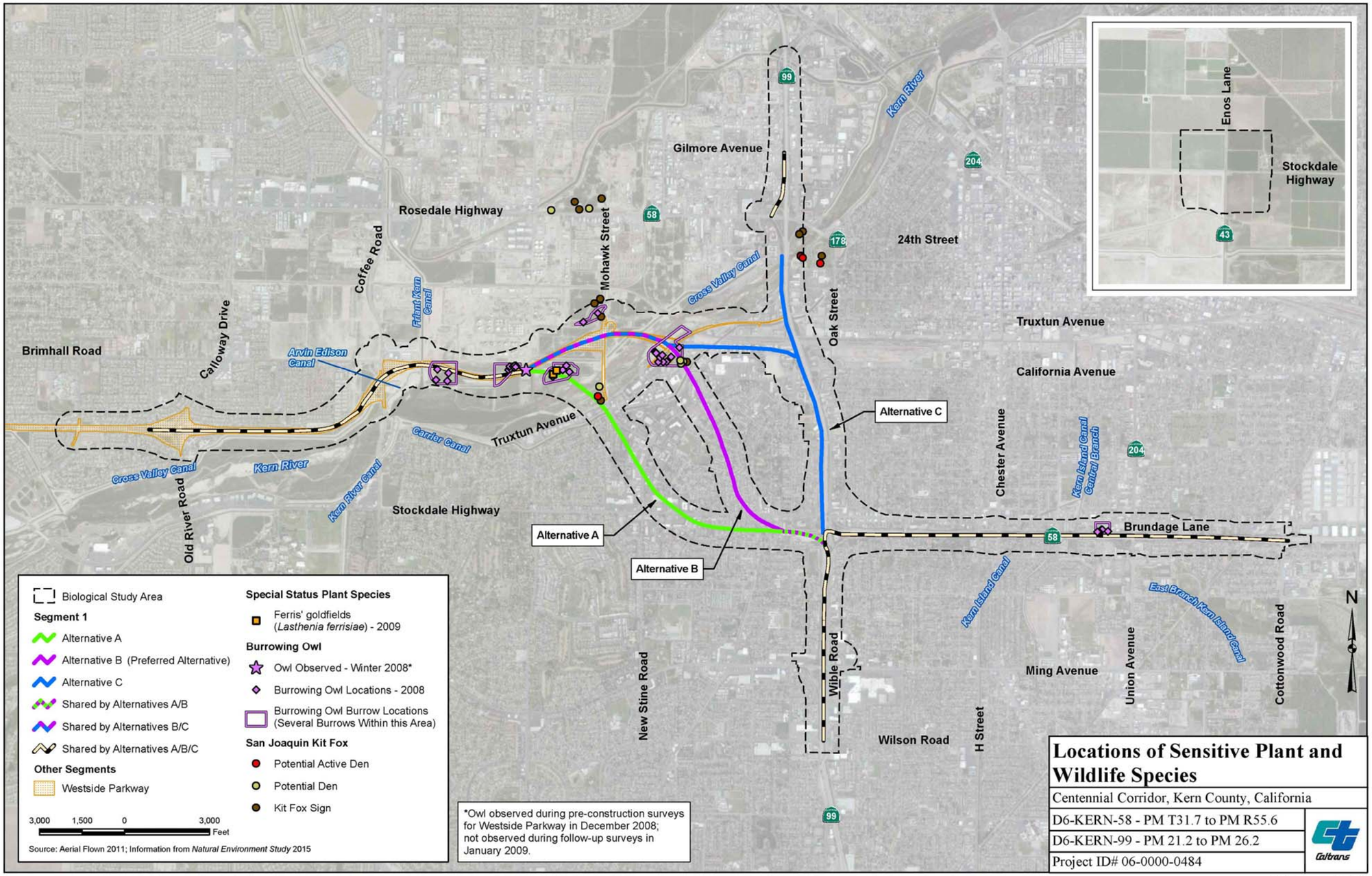

Enos Lane
Stockdale Highway
43
Gilmore Avenue
Kern River
99
204
Rosedale Highway
58
Mohawk Street
178
24th Street
Coffee Road
Friant Kern Canal
Cross Valley Canal
Oak Street
Truxtun Avenue
Calloway Drive
Brimhall Road
Arvin Edison Canal
California Avenue
Alternative C
Carrier Canal
Truxtun Avenue
Chester Avenue
Kern Island Canal Central Branch
Cross Valley Canal
Kern River
Old River Road
Kern River Canal
Stockdale Highway
Alternative A
Alternative B
Brundage Lane
58
Kern Island Canal
East Branch Kern Island Canal
New Stine Road
Wible Road
Ming Avenue
Union Avenue
Cottonwood Road
N
Wilson Road
H Street
99
Biological Study Area
Segment 1
Alternative A
Alternative B (Preferred Alternative)
Alternative C
Shared by Alternatives A/B
Shared by Alternatives B/C
Shared by Alternatives A/B/C
Other Segments
Westside Parkway
Special Status Plant Species
Ferris' goldfields (Lasthenia ferrisiae) - 2009
Burrowing Owl
Owl Observed - Winter 2008*
Burrowing Owl Locations - 2008
Burrowing Owl Burrow Locations (Several Burrows Within this Area)
San Joaquin Kit Fox
Potential Active Den
Potential Den
Kit Fox Sign
3,000 1,500 0 3,000
Feet
Source: Aerial Flown 2011; Information from Natural Environment Study 2015
*Owl observed during pre-construction surveys for Westside Parkway in December 2008; not observed during follow-up surveys in January 2009.
Locations of Sensitive Plant and Wildlife Species
Centennial Corridor, Kern County, California
D6-KERN-58 - PM T31.7 to PM R55.6
D6-KERN-99 - PM 21.2 to PM 26.2
Project ID# 06-0000-0484
Caltrans

Figure 3-54

Appendix A California Environmental Quality Act Checklist

This checklist identifies physical, biological, social and economic factors that might be affected by the project. In many cases, background studies performed in connection with the projects indicate no impacts. A No Impact answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to California Environmental Quality Act, not National Environmental Policy Act impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☒	☐	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐
II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒
VI. GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

VII. GREENHOUSE GAS EMISSIONS: Would the project: a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document (refer to Section 4.5, Climate Change under the California Environmental Quality Act). While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j) Inundation by seiche, tsunami, or mudflow	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
X. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	☒	☐	☐	☐
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☒	☐	☐	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒
XI. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒
XII. NOISE: Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☒	☐	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐
XIV. PUBLIC SERVICES:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☒	☐	☐
Other public facilities?	☐	☐	☐	☒
XV. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☐	☒
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

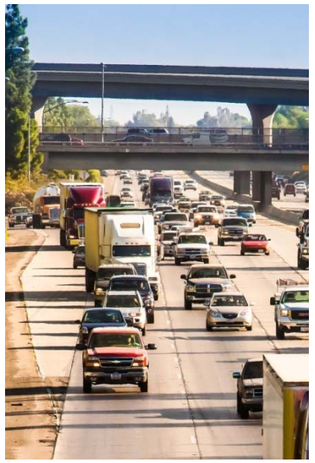
Appendix B Section 4(f) Evaluation

Centennial Corridor Project

City of Bakersfield and Kern County, CA
District 06 - KER – 58 - PM T31.7 to PM R55.6
District 06 - KER – 99 - PM 21.2 to PM 26.2

Project ID # 06-0000-0484
SCH #2008091102

Final Section 4(f) Evaluation



Prepared by the
State of California Department of Transportation

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by the California Department of Transportation under its assumption of responsibility pursuant to 23 U.S Code 327.

October 2015

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List of Tables

1.0 Introduction and Overview of Section 4(f) Process

1.1 Introduction

This report evaluates the effects of establishing a new alignment for State Route 58 that would provide a continuous route along State Route 58 from Interstate 5 via the Westside Parkway to Cottonwood Road on existing State Route 58 east of State Route 99 (post miles T31.7 to R55.6). Improvements to State Route 99 (post miles 21.2 to 26.2) would also be made to accommodate the connection with State Route 58.

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 United States Code 327.

The following technical reports and documents, prepared as part of the final environmental document for the project, were used in support of the evaluation presented in this report:

- Air Quality Study Report, February 2014
- Noise Study Report, March 2014
- Natural Environment Study, April 2015
- Historical Property Survey Report, March 2014
  - Historic Resources Evaluation Report, March 2014
  - Caltrans Historic Bridge Inventory Sheet, October 2011
  - Archaeological Survey Report, March 2014
  - Extended Phase I, Stage I (Geoarchaeological Study), March 2014
  - Extended Phase I, Stage II (Geoarchaeological Study) for Alternative B, February 2015
  - Finding of Effect, April 2014
  - Section 106 Memorandum of Agreement, January 2015
- Visual Impact Assessment, March 2014
- Community Impact Assessment, May 2015

No permanent or temporary use of Section 4(f) properties would occur with implementation of Alternative B, the Preferred Alternative. Alternatives A and C would result in the permanent use of two park and recreation properties and one historic district considered Section 4(f) properties. Refer to Section 2.3 below for a more detailed description of the proposed project alternatives.

1.2 Regulatory Setting

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 United States Code 303, declares that "it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

Section 4(f) specifies that the "Secretary [of Transportation] may approve a transportation program or project requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

1) there is no prudent and feasible alternative to using that land; and
2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use."

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Department of Agriculture and the Department of Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer (SHPO) is also needed.

Coordination with the Department of Agricultural and Department of Housing and Urban Development is not required for the project because there would be no impacts to National Forest System lands or federal funding from the Department of Housing and Urban Development. Because historic sites are involved coordination with the State Historic Preservation Officer is needed.

1.3 Section 4(f) Use

As defined in 23 Code of Federal Regulations (CFR) Section 774.17, use of a protected Section 4(f) property occurs when any of the following conditions is met:

- Land is permanently incorporated into a transportation facility through partial or full acquisition (i.e., direct use).
- There is a temporary occupancy of land that is adverse in terms of the preservationist purposes of Section 4(f) (i.e., temporary use).
- There is no permanent incorporation of land, but the proximity of a transportation

facility results in impacts so severe that the protected activities, features, and/or attributes that qualify a property for protection under Section 4(f) are substantially impaired (i.e., constructive use).

1.4 Federal Highway Administration – Section 4(f) Policy Paper

In its *Section 4(f) Policy Paper* (July 20, 2012), the Federal Highway Administration provided guidance on how Section 4(f) applies generally and to specific situations where resources meeting the Section 4(f) criteria may be involved. As it relates to publicly owned bodies of water such as portions of the Kern River (see discussion of Kern River Parkway in Section 4.2.1), the Policy Paper notes that, in general, rivers are not subject to the requirements of Section 4(f), although Section 4(f) may be applicable to portions of a river contained within the boundaries of otherwise designated parks.

1.5 Section 6(f)

Section 6(f)(3) of the Land and Water Conservation Fund Act (16 U.S. Code §4601-4) also contains provisions to protect federal investments in park and recreation properties and the quality of those assisted properties. The Land and Water Conservation Fund Act includes a clear "anti-conversion" requirement that applies to all parks and other sites that have been the subject of Land and Water Conservation Fund grants of any type, whether for acquisition of parkland, development, or rehabilitation of facilities.

2.0 Description of the Project

2.1 Background

The proposed continuous route, known as the Centennial Corridor, has been divided into three segments (see Figure 1). This Section 4(f) Evaluation solely focuses on Segment 1:

- Segment 1 is the easternmost portion of the Centennial Corridor project. It begins near the intersection of State Route 58 and Cottonwood Road and continues westerly to connect to the Westside Parkway. The study area for Segment 1 is bound to the east by Cottonwood Road, to the west by Coffee Road, to the north by Gilmore Avenue, and to the south by Wilson Road.
- Segment 2 is composed of the Westside Parkway, which will ultimately extend from about Truxtun Avenue to Stockdale Highway near Heath Road.

The final segment of the parkway from Allen Road to Stockdale Highway was completed and opened to traffic in April 2015.

- Segment 3 traffic would use Stockdale Highway between Heath Road and Interstate 5, which would serve as State Route 58 through at least the planning horizon year of 2038. Funding sources for Segment 3 have not yet been identified/programmed.

2.2 Purpose and Need for the Project

The purpose of the Centennial Corridor project is to provide route continuity and associated traffic congestion relief along State Route 58 within metropolitan Bakersfield and Kern County from existing State Route 58 (East) (at Cottonwood Road) to Interstate 5.

State Route 58 is a critical link in the state transportation network used by interstate travelers, commuters, and a large number of trucks. Under existing conditions, State Route 58 does not meet the capacity needs of the area, and this is expected to get worse as the population grows. State Route 58 lacks continuity in central Bakersfield, which results in severe traffic congestion and reduced levels of service on adjoining highways and local streets. The effectiveness of traffic operations on a transportation facility is measured in terms of "level of service", an A through F scale with level of service A representing the best traffic conditions (free-flowing traffic) and level of service F representing the worst (congestion and stop-and-go traffic). Different level of service definitions are provided for freeways, multi-lane highways, intersections with signals, and intersections without signals. This route is offset by about 1 mile at State Route 43 (known locally as Enos Lane) and by about 2 miles at State Route 99. The merging of two major state routes (State Route 58 and State Route 99) into one alignment between the eastern and western legs of State Route 58 degrades the traffic level of service on this segment of freeway. In addition, the close spacing of two State Route 99 interchanges with State Route 58 (East and West), as well as an interchange at California Avenue, results in vehicles aggressively changing lanes, which adds to the congestion. See Volume 1, Chapter 1, Purpose and Need for the Project for additional information.

2.3 Alternatives

The following provides a summary of the proposed project components. Chapter 2 of this final environmental document provides additional detailed information.

2.3.1 No-Build Alternative

The No-Build Alternative would make no improvements. The Westside Parkway would be built as a local freeway but would not connect to State Route 58, State Route 99, or Interstate 5. State Route 58 (West)/Rosedale Highway would still end at State Route 99 and share the highway with State Route 99 for about 2 miles south before tying into State Route 58 (East). Normal maintenance and repairs such as roadway cleaning, pothole repair, landscape maintenance, irrigation repairs, and inspections would be undertaken for the Westside Parkway and State Route 58 (West)/Rosedale Highway.

2.3.2 Build Alternatives

Three build alternatives—Alternative A, Alternative B, and Alternative C—and the No-Build Alternative are evaluated in this Section 4(f) Evaluation.

Segment 1

As discussed above, Segment 1 is the easternmost segment of the Centennial Corridor project. It begins near the State Route 58 and Cottonwood Road intersection and continues westerly to connect to the Westside Parkway. The study area for Segment 1 is bound to the east by State Route 58 and Cottonwood Road, to the west by Westside Parkway and Coffee Road, to the north by Gilmore Avenue, and to the south by Wilson Road.

As shown in Figure 2, the three build alternatives (Alternative A, Alternative B, and Alternative C) propose new alignments that would extend from the existing State Route 58 (East) and connect to the eastern end of the Westside Parkway. Alternative A and Alternative B would be west of State Route 99; Alternative C would parallel State Route 99 to the west. Under Alternative A, the eastern end of the Westside Parkway mainline would be realigned to conform to the Alternative A alignment, and ramp connections would be provided to the Mohawk Street interchange. Under Alternatives B and C, the alignments would connect to the Westside Parkway by extending the main line lanes built as part of the Westside Parkway project. Detailed descriptions of the alternatives are provided below.

Alternative A

Alternative A would travel westerly from the existing State Route 58/ State Route 99 interchange for about 1 mile, south of Stockdale Highway, where it would turn northwesterly and span Stockdale Highway/Montclair Street, California Avenue/ Lennox Avenue, Truxtun Avenue, and the Kern River before joining the eastern end of the Westside Parkway between the Mohawk Street and Coffee Road interchanges.

A link would be provided from northbound State Route 99 to westbound State Route 58 and from eastbound State Route 58 to southbound State Route 99 via high-speed connectors. No direct connector ramps would be built from southbound State Route 99 to westbound State Route 58 or from eastbound State Route 58 to northbound State Route 99. Southbound State Route 99 would be widened to accommodate the additional traffic from eastbound State Route 58 to the southbound State Route 99 connector. The existing westbound State Route 58 to southbound State Route 99 loop-ramp connector would be realigned and would connect to the proposed eastbound State Route 58 to southbound State Route 99 connector before merging onto southbound State Route 99. The existing southbound State Route 99 to eastbound State Route 58 connector and northbound State Route 99 to eastbound State Route 58 would be preserved with some changes.

The limits of widening on State Route 99 would extend to the Wilson Road overcrossing. On northbound State Route 99, a three-lane exit would be provided just north of Wilson Road to carry the northbound State Route 99 to westbound State Route 58 traffic on two lanes and the Ming Avenue on- and off-ramp traffic on the third lane. All ramps in this area would have to be realigned to provide the additional lanes. The Wible Road on- and off-ramps just south of the existing State Route 58/ State Route 99 interchange that is in conflict with the Caltrans standards of interchange spacing would have to be removed to accommodate this design. The Stockdale Avenue off-ramp on the southbound State Route 99 to eastbound State Route 58 connector would be removed as well. Under this concept, State Route 58 would also lose its link with Real Road. In addition, Alternative A would provide an auxiliary lane on State Route 99 from south of Gilmore Avenue to the Rosedale Highway off-ramp.

Alternative B (Preferred Alternative)

Alternative B (Preferred Alternative), would run westerly from the existing State Route 58/State Route 99 interchange for about 1,000 feet, south of Stockdale Highway, where it would turn northwesterly and span Stockdale Highway/Stine Road, California Avenue, Commerce Drive, Truxtun Avenue, and the Kern River before joining the east end of Westside Parkway near the Mohawk Street interchange. This alignment would depress State Route 58 between California Avenue and Ford Avenue. Overcrossings are proposed at Marella Way and La Mirada Drive to ease traffic circulation. The option of removing the La Mirada Drive overcrossing from Alternative B was also considered. Removal of the overcrossing would not substantially change access, which would be provided by the Marella Way

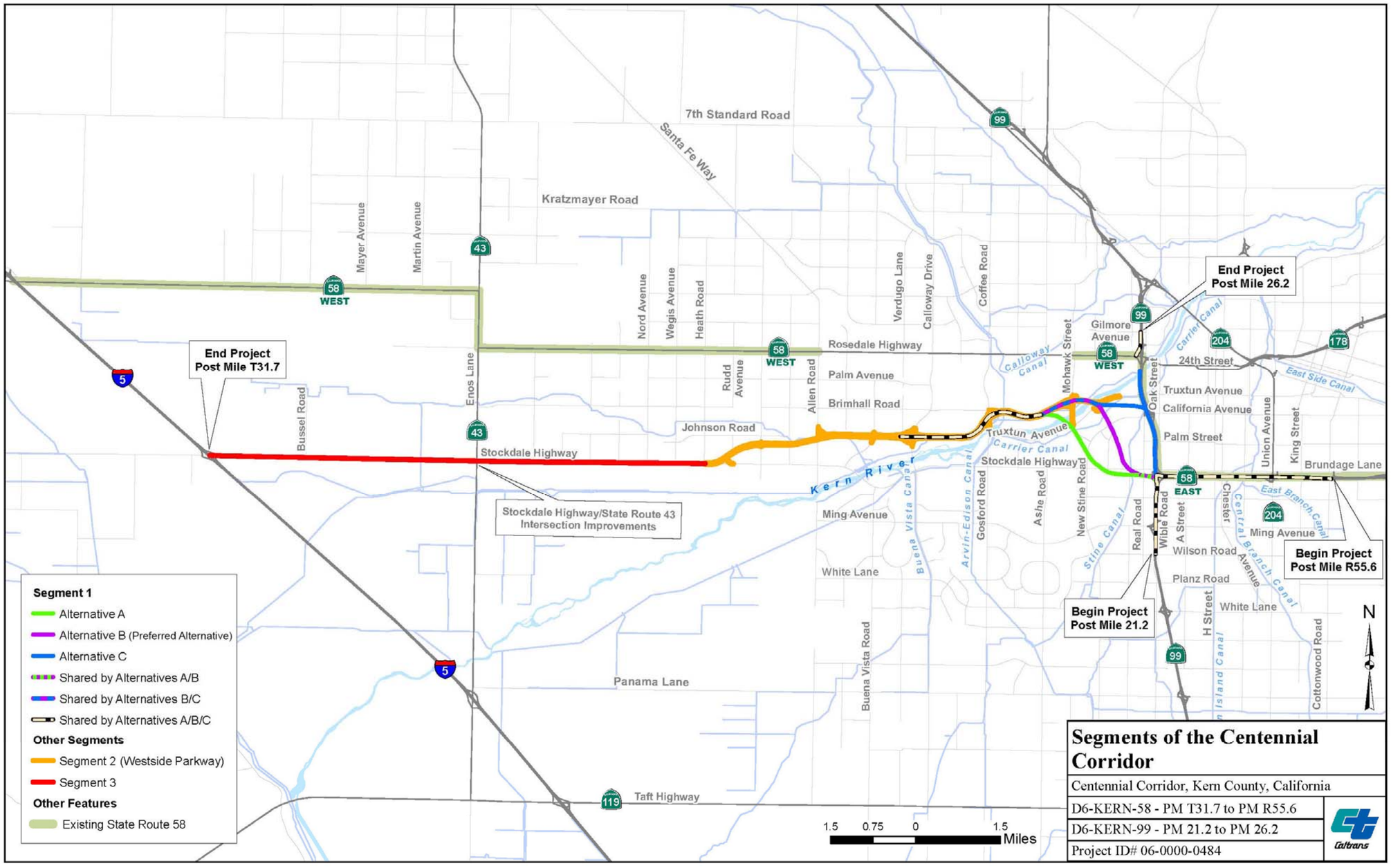


Figure 1 Segments of the Centennial Corridor

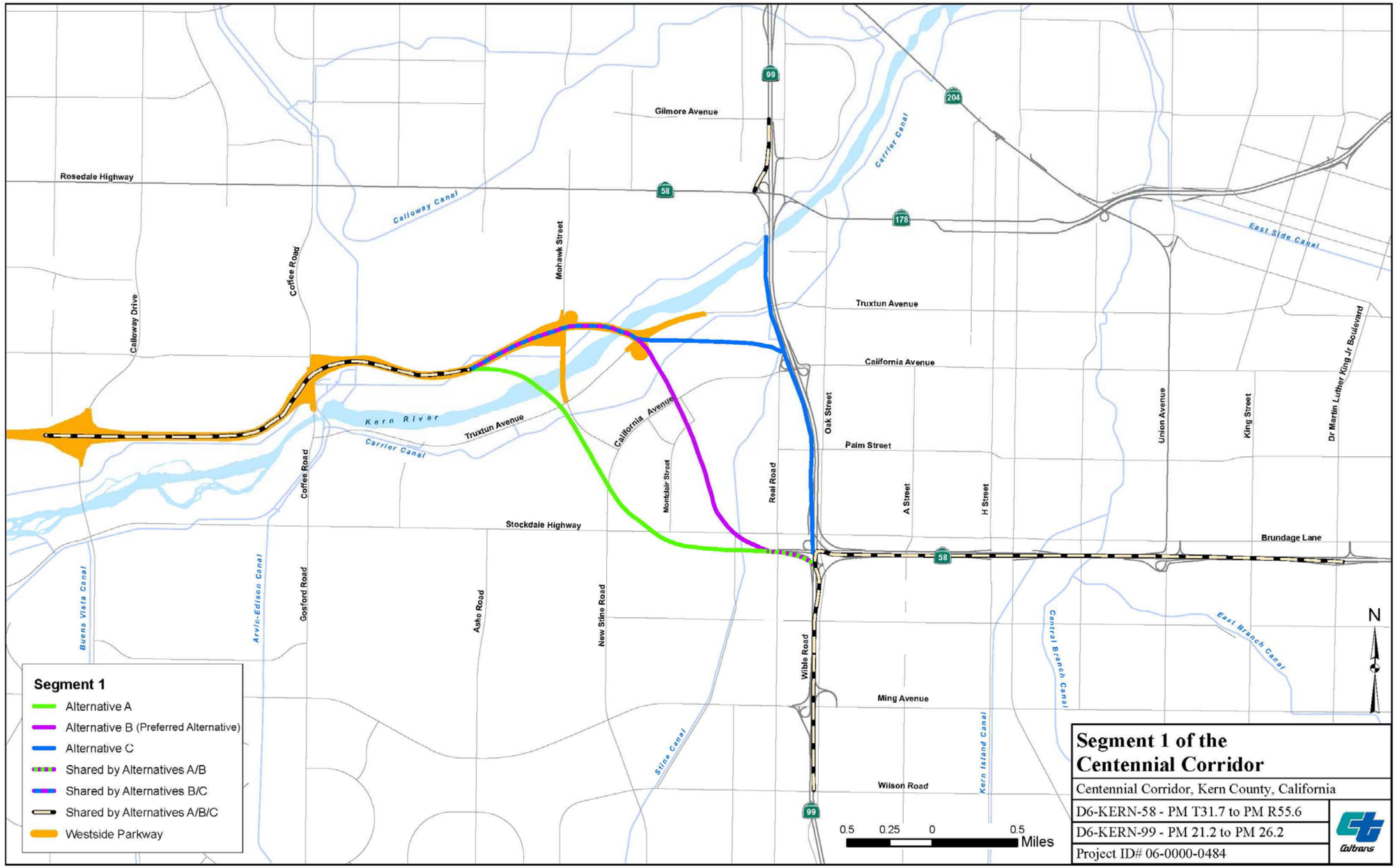


Figure 2 Segment 1 of Centennial Corridor

overcrossing. Removal of the La Mirada Drive overcrossing would eliminate the need to displace 13 single family homes on La Mirada Drive near Centennial Park and save about $2.5 million in construction costs. The option for adding a Ford Avenue undercrossing would maintain connection of Ford Avenue between Stine Road and McDonald Way. The undercrossing would not require the acquisition of any additional property and would add about $5.5 million in construction costs. However, after circulating the draft environmental document, and receiving public comments, Caltrans has decided to construct all proposed crossings including the proposed La Mirada Drive overcrossing. Additionally, the city will coordinate with Caltrans to install a dedicated new pedestrian sidewalk for the benefit of residents living in homes south of La Mirada Drive and Joseph Drive. The pedestrian sidewalk would enhance connectivity to newly divided areas and shorten the route for pedestrians to access popular community facilities located on either side of the freeway, including Centennial Park, Harris Elementary school, and other neighborhood destinations. This proposed feature would upgrade bicyclist and pedestrian access via La Mirada Drive.

Alternative B proposes the same connections to State Route 99 that Alternative A proposes and would require similar improvements on State Route 99 and existing State Route 58.

Alternative C

Near the existing State Route 58/ State Route 99 interchange, Alternative C would turn north and run parallel to the west of State Route 99 for about 1 mile. The freeway would turn west and span the Burlington Northern Santa Fe Railway rail yard, Truxtun Avenue, and the Kern River. This alternative proposes undercrossings at Brundage Lane, Oak Street, State Route 99, Palm Street, and California Avenue.

Connections would be provided from eastbound State Route 58 to southbound State Route 99 and from northbound State Route 99 to westbound State Route 58. The existing westbound State Route 58 to southbound State Route 99 loop-ramp connector would connect to the proposed eastbound State Route 58 to the southbound State Route 99 connector before merging onto southbound State Route 99. The southbound State Route 99/Ming Avenue off-ramp would be moved north of the eastbound State Route 58 to southbound State Route 99 connector to ease lane changes between the Ming Avenue off-ramp and the eastbound State Route 58 to southbound State Route 99 connector traffic. An auxiliary lane on northbound State Route 99 would be provided south of California Avenue. The lane would extend to the State Route 58/ State Route 99 interchange to ease lane changes between westbound State Route 58

to northbound State Route 99 and northbound State Route 99 to westbound State Route 58.

Improvements on State Route 99 would extend from the Wilson Road overcrossing (south of the State Route 58/State Route 99 interchange) to the Gilmore Avenue overcrossing (north of the State Route 58/State Route 99 interchange). A collector-distributor road system would provide access from westbound State Route 58 to northbound State Route 99, as well as from northbound State Route 99 to westbound State Route 58. The Wible Road on- and off-ramps just south of the existing State Route 58/State Route 99 interchange would have to be removed to accommodate the northbound State Route 99 auxiliary lane. The Stockdale Avenue off-ramp on the southbound State Route 99 to eastbound State Route 58 connector would be removed as well. Under this concept, southbound State Route 99 would also lose its link with Real Road. See Volume 1, Chapter 2, Project Alternatives for additional information.

3.0 Description of the Proposed Construction Activities

3.1 Construction Scenario

Site clearing and demolition would begin once the right-of-way acquisition process is complete. The corridor would be cleared of conflicting structures and improvements in preparation for the project construction. Electrical transmission towers, oil wells, canal culverts, and other existing utilities that would interfere with construction of the corridor improvements would be removed and relocated or encased for continuing service. In addition, utilities crossing the alignment may need to be removed and relocated to either temporary (requiring final relocation later in the construction process) or permanent locations.

A Traffic Management Plan would be developed to reduce the impacts of traffic congestion and detours during construction. With the exception of short-term closures to install bridge falsework (temporary supports while the bridge is being built), most of the arterial roadways and most secondary streets crossing the construction corridor would remain open during construction. Burlington Northern Santa Fe Railway operations would not be interrupted or delayed during construction.

The current construction schedule assumes activities would begin in 2016 and end in 2018.

4.0 Description of the Section 4(f) Properties

4.1 Identification of Section 4(f) Properties

As discussed in Section 1.2, Regulatory Setting, properties subject to the provisions of the requirements of Section 4(f) are publicly owned parks and recreation areas, wildlife and waterfowl refuges of national, state, or local significance, and historic sites of national, state, or local significance.

Two public parks and one National Register of Historic Places-eligible historic district were identified as potentially affected Section 4(f) properties within the study area, which is within a 0.5-mile radius of the proposed project. These are described in the following sections and are shown in Figure 3.

4.2 Public Parks and Recreational Facilities

Building Segment 1 would require conversion of some existing parkland and recreational areas to transportation uses, including 6.28 acres for Alternative A and 3.27 acres for Alternative C. Alternative B would not require any conversion of parkland/recreational use to transportation use. No temporary construction easements are required for any of the alternatives being considered.

4.2.1 Kern River Parkway

The Kern River Parkway is within the city of Bakersfield and Kern County. Within Bakersfield, the Kern River Parkway consists of about 1,400 acres and extends along the Kern River from Manor Street on the east to the Stockdale Highway Bridge on the west. The width of the parkway varies, but it generally ranges from 30 to 2,200 feet, with most of it contained within the primary and secondary floodway (areas reserved for flood control and water conservation) of the Kern River. Existing and proposed recreation areas account for 220 acres. The primary river channel, habitat areas (including areas for educational studies), and recharge basins account for 1,105 acres. Parking uses account for 8 acres, rest areas 2 acres, and landscaped areas 65 acres. Further details are provided in Attachment A. Of the estimated 1,400 acres that comprise the parkway, about 255 acres, or 18.2 percent, are privately owned. About 950 acres, or 67.9 percent, are owned by the city of Bakersfield and 195 acres, or 13.9 percent, are owned by other public agencies or utility companies. The Kern River Parkway Master Plan governs the land use plan for the parkway and identifies proposed uses such as the primary river channel, natural open space, landscaped areas, existing and proposed recreation areas, access points, parking areas, bridge

crossings, and other similar designations. The following priority uses are identified in the Kern River Parkway Draft Master Plan Environmental Impact Report (1988):

- Flood control for public safety and protection of property
- Water conservation and groundwater recharge to provide water for existing and future residents and to maintain a viable resource
- Protection and enhancement of the Kern River corridor to maintain and protect open spaces unique to the river
- Improved public access to parkway areas such as passive recreational areas where feasible.

Flood control is the major priority of the parkway because the river runs through a large metropolitan area where protection from flooding is critical. This priority is met through the Channel Maintenance Program adopted by the city of Bakersfield in January 1986. The purpose of the Channel Maintenance Program is to preserve storm flow carrying capacity of the Kern River as it passes through Bakersfield. The channel maintenance area, encompassing the entire parkway between Manor Street and Stockdale Highway Bridge, is confined primarily to the designated floodway with limited excavation in the secondary floodway.

As noted above, within Bakersfield, the Kern River Parkway is a multi-use area though not designated specifically as a park. It does contain some public parks or trails, however, which qualify as Section 4(f) properties. Because the use or ownership of parcels within the Kern River Parkway is complex, Attachment A (Kern River Parkway Memorandum) of this appendix and Section 5.2.1 provide background information and analysis on these items.

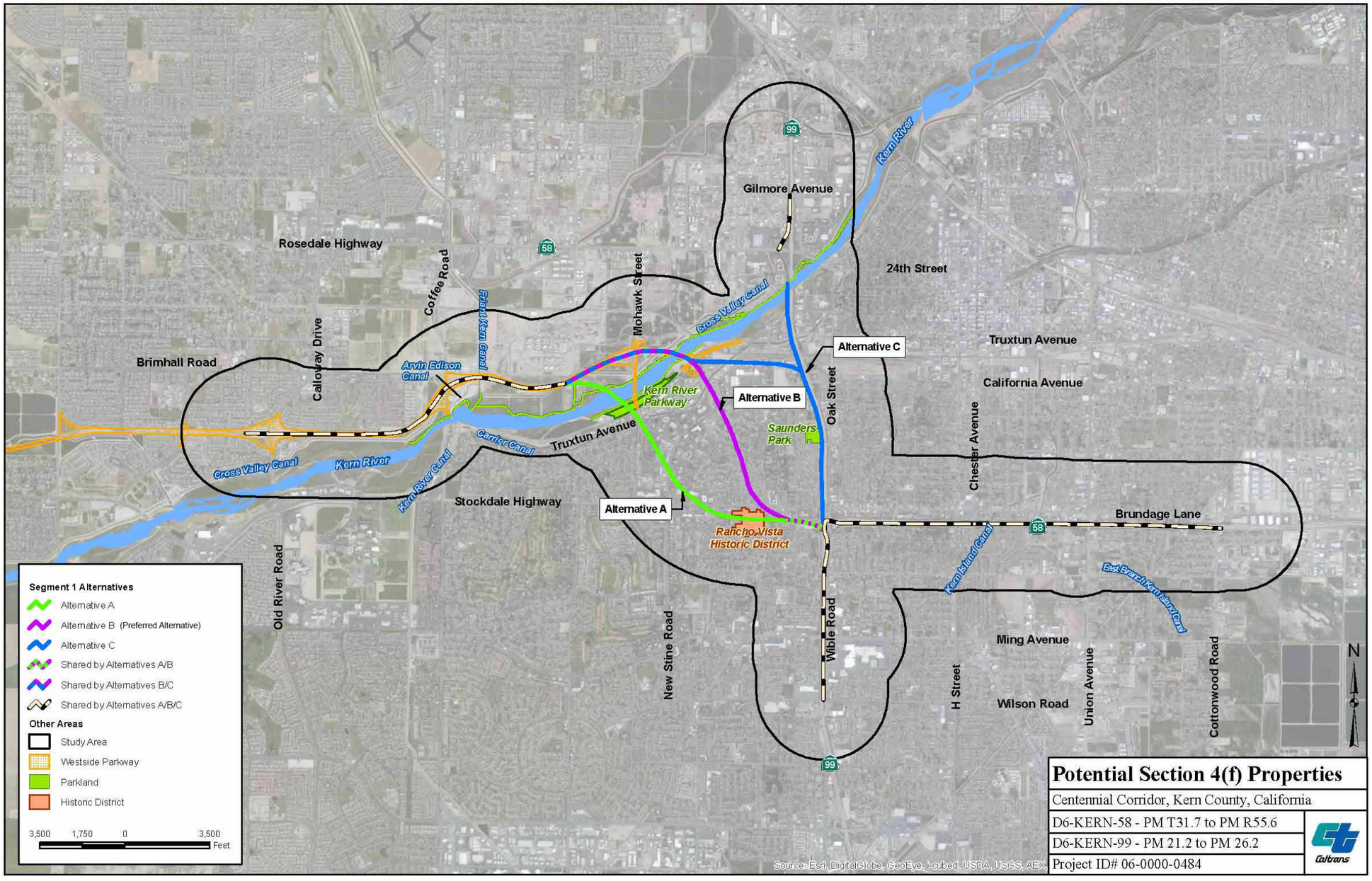


Figure 3 Potential Section 4(f) Properties

A review of the Kern River Master Plan indicates that two areas designated for recreation uses could be affected by building the Centennial Corridor. The first area (known as the Kern River Parkway Park [ParCourse] landscaped with turf and trees) is along the river (outside of the primary or secondary floodway) and extends from about Commercial Way to the vicinity of Lake Truxtun. This area is owned by the city of Bakersfield and contains a 24-acre park. Amenities include three sand volleyball courts; Frisbee golf course; a multi-use trail used by bicyclists, pedestrians, joggers, and skaters; the Hoey Trail, and three off-site surface parking areas (96 spaces). Two access points to the park are available from Truxtun Avenue. An equestrian trail is on the north side of the river about 1,000 feet from the parkway. A portion of the area (in the immediate vicinity of Mohawk Street and Truxtun Avenue) would be needed to build a Kern River overcrossing associated with Alternative A.

The second area is along the river from the existing Burlington Northern Santa Fe railroad bridge (near Truxtun Avenue) to the vicinity of Commercial Way (see Figures 5 and 6). This area, owned by the city of Bakersfield, is unimproved and its primary role is flood control. With the exception of the Kern River Multi-Use Trail (paved and used for bicycling and walking), the Hoey Trail (unpaved and used for mountain bike riding and cross-training) located along the south side of the river, and the equestrian trail (unpaved and intended for use by horse and rider) located on the north side of the river, there are no park amenities contained on-site and no public access (access is also not approved outside of the designated trail areas). The Kern River Multi-Use and Hoey Trails are heavily used daily by local residents, while the Equestrian Trail and Par Course are moderately used and mostly on weekends and evenings. These properties are protected under Section 4(f). As noted previously in Section 5.2.1 (final environmental document, Volume 1), the property has never been used for park uses and is not planned for such uses in the future. A portion of the area (east of Commercial Way and Truxtun Avenue) would be needed to build a Kern River overcrossing for Alternative B or Alternative C.

4.2.2 Saunders Park

Saunders Park, 3300 Palm Street, Bakersfield, California, is an 11.3-acre public park just west of State Route 99. The park is bordered by a city-owned retention basin to the north, State Route 99 to the east, and single-family residences to the south and west. Owned by the city of Bakersfield, the park is administered by the Recreation and Parks Department.

According to the Recreation and Parks Department's website, Saunders Park is a neighborhood park mostly used by residents within a 0.75-mile radius. On average, 400 visitors access this park each week according to Dianne Hoover, Recreation and Parks Director (personal communication, March 21, 2012). Saunders Park can be accessed by vehicles, pedestrians, and bicyclists. Park facilities include two lighted full basketball courts, one equipment building/room, one picnic shelter for families, one restroom building, a roller hockey facility, four horseshoe pits, a splash/water play area, and an undeveloped area along the northern portion of the park.

The splash/water play area is a concrete pad about 70 feet wide by 100 feet long in the southeast corner of the park. Within this area are several structures used to spray water or provide water-filled buckets that spill onto the children below. Water flow is activated by rubbing an initiator. The water continues to flow for a set amount of time before automatically shutting off. A portion of the park would be required to construct Alternative C only.

4.3 Rancho Vista Historic District

Rancho Vista Historic District is a residential subdivision eligible for the National Register of Historic Places under Criterion A for its significance in incorporating innovative mass-production technology during post-World War II. Under Criterion C the Rancho Vista Historic District is an important example of a postwar subdivision consisting entirely of houses built by the whole-house prefabrication method. Rancho Vista Historic District is significant at the local level with a period of significance from 1950 to 1957 when the residences were constructed. The historic boundary of this property is generally defined by Stine Road to the east, Stockdale Highway to the north, McDonald Way to the west, and Quarter Avenue to the south. A more precise boundary, which excludes some non-contributing parcels that are part of the original tract development along perimeter streets, has been delineated as part of the Section 106 (National Historic Preservation Act) documentation prepared for the project. The following are identified character-defining features of this tract:

- *Design characteristics of the tract*: Rounded concrete curbs; concrete sidewalks placed next to the curb with no planting strip; houses set back from the curb at varying distances, and mature trees that were planted as part of the initial tract development.
- *Design characteristics of the houses*: Small, one-story residences with compact plans and wood-frame construction on low concrete foundations; varied roof forms such as gable, hip, and combination roofs; wood siding in a

variety of types, applied vertically and horizontally; and metal casement windows.

Under Section 106 of the National Historic Preservation Act, the Rancho Vista Historic District is eligible for the National Register. Alternative A would bisect the Rancho Vista Historic District.

5.0 Impacts on Section 4(f) Properties

This section describes how the Centennial Corridor project build alternatives would affect two public parks and one National Register-eligible historic district, all Section 4(f) properties. An assessment was made as to whether any permanent use or temporary occupancy of land from these Section 4(f) properties would result in direct effects that would substantially impair the activities, features, and/or attributes that trigger the provisions of Section 4(f).

The following subsections describe the permanent uses and temporary occupancy of the parks and National Register-eligible historic district by the No-Build Alternative and Alternative A, Alternative B, and Alternative C, the build alternatives. Analysis of whether Alternative B (Preferred Alternative) will have a constructive use of the National Register-eligible historic district under Section 4(f) is also presented below.

In addition to identifying the permanent use and temporary occupancy impacts of the project, the effects on the Section 4(f) properties related to facilities, functions, and activities potentially affected are also addressed. The impacts on accessibility, visual changes, noise, vegetation, wildlife, air quality, and water quality are also evaluated for each project alternative. Table B.1 summarizes, by alternative, the permanent use and temporary occupancy of the parks, recreational facilities, and National Register-eligible historic district.

Alternatives to avoid the use of Section 4(f) properties are studied and discussed in Section 6.0. Minimization measures to reduce impacts to affected properties are described in Section 7.0.

Table B.1 Summary of Permanent Use and Temporary Occupancy of Section 4(f) Properties

Site	Alternative A		Alternative B (Preferred Alternative)		Alternative C	
	Use or Occupancy	Percent	Use or Occupancy	Percent	Use or Occupancy	Percent
Kern River Parkway Park (ParCourse)	Permanent use: up to 6.28 acres	3.2	No use or occupancy	None	No use or occupancy	None
Saunders Park	No use or occupancy	None	No use or occupancy	None	Permanent use: up to 3.27 acres	43
Rancho Vista Historic District	Direct use of 46 of the 81 contributing residences	57	No use or occupancy	None	No use or occupancy	None
Note: Percent indicated is approximate.						

5.1 No-Build Alternative

The No-Build Alternative would not construct any of the improvements proposed in Alternative A, Alternative B, or Alternative C; therefore, it would not result in the permanent use, temporary occupancy, or impairment of land from any Section 4(f) properties. The No-Build Alternative is not discussed in this section.

5.2 Build Alternatives

The following subsections describe direct use of the two parks and National Register-eligible historic district under each build alternative. An evaluation was also done to determine if indirect impacts from the build alternatives would result in substantial impairment of these properties. This is more formally referred to as a constructive use under Section 4(f). That analysis did not identify any proximity impacts resulting from the build alternatives that would be so severe that the activities, features, and/or attributes that qualify these properties for protection under Section 4(f) would be substantially impaired. The proximity impacts of the build alternatives in the vicinity of these properties would not meaningfully reduce or remove the values of these properties in terms of their Section 4(f) significance; therefore, the build alternatives were determined not to result in substantial impairment of any properties protected under Section 4(f).

5.2.1 Kern River Parkway

Facilities, Functions, and/or Activities Potentially Affected

As shown in Figure 4, Alternative A would result in the removal of a portion of the Kern River Parkway Park (Par Course) (west side of the park) in the immediate vicinity of Mohawk Street and Truxtun Avenue. Three sand volleyball courts and most of a Frisbee golf course would be removed from this area. Mature trees and other vegetation within the parkway would also be removed within the project footprint. No amenities on the east side of the parkway would be removed. On the south side of the river, a 1000-foot segment of both the Kern River Multi-Use Trail and the Hoey Trail that borders the parkway would be moved about 200 feet northwest of their current locations. On the north side of the river, a 1,500-foot segment of the existing equestrian trail would be moved about 200 feet south of its current location. Prior to building the bridge over the Kern River, the new locations for the Kern River Multi-Use Trail, the Hoey Trail, and the equestrian trail would be constructed. As a result, none of the trails would be closed during construction.

The area where the volleyball courts and the Frisbee golf course are located would not be available for the public to use once construction starts. With the removal of the volleyball courts and Frisbee golf course, the main recreational function of this area of the Kern River Parkway would be removed and not replaced. Patrons of the east side of the park would continue to have access to grassy areas, the Kern River Multi-Use Trail, and the Hoey Trail. The parking areas within all areas of the park would still be available for use, and no parking spaces are planned for removal. The Kern River Multi-Use Trail, Hoey Trail, and the equestrian trail would still function as trails. Access to the parkway would continue to be available along Truxtun Avenue.

Building Alternative A would have a permanent use of about 0.15 acre of the equestrian trail, 0.18 acre of the Kern River Multi-Use Trail, 0.12 acre of the Hoey Trail, and 5.83 acres of the parkland, including the volleyball courts and Frisbee golf course, for a total of 6.28 acres of parkland and recreational use areas.

Alternatives B and C would cross over the Kern River on an elevated bridge structure (see Figures 5 and 6) in the vicinity of Truxtun Avenue between the Burlington Northern Santa Fe railroad bridge and Commercial Way. These alignments would not affect the Kern River Multi-Use Trail, Hoey Trail or equestrian trail because they would span this area. The Kern River Multi-Use Trail, Hoey Trail and equestrian trail would be open during both construction and operation of the Centennial Corridor project. Alternatives B and C would not directly use the Kern River Multi-Use Trail,

Hoey Trail or equestrian trail. As such, building either Alternatives B or C would not impair the activities, features, or attributes that qualify the multi-use path for protection under Section 4(f).

Because the use and ownership of the Kern River Parkway is complex, the status of the areas proposed for use by Alternatives B and C requires further discussion. The land crossing the Kern River shown in Figure 7 was previously in private ownership and was purchased by the city of Bakersfield solely in support of the Westside Parkway project. As such, this land is not being used for recreational purposes and was never intended to be used for such purposes. Therefore, the publicly owned land in this area is not subject to the provisions of Section 4(f).

Figure 9 shows land ownership along the Kern River and the Centennial Corridor project crossing the Kern River for Alternative B. The Centennial Corridor project meets the Westside Parkway project in this area where the land was purchased for purposes of the Westside Parkway project. There is enough available land purchased for Westside Parkway to accommodate either Alternative B or C of the Centennial Corridor at this location.

The Centennial Corridor project would construct bridge bents (vertical supports) in the riverbed. As discussed in Section 1.4, according to the Federal Highway Administration's *Section 4(f) Policy Paper* (July 20, 2012), Section 21, Bodies of Water, in general, such as rivers, are not subject to the requirements of Section 4(f) unless there are portions of the river that are contained within the boundaries of parks to which Section 4(f) otherwise applies. In addition, as noted in the *Section 4(f) Policy Paper*, unless portions of a water body are primarily designated for recreational use, they are not considered subject to the provisions of Section 4(f). Such is the case for the Kern River, which is designated by the Kern River Plan Element (2007) for floodway management purposes only (the city of Bakersfield has a flood management agreement in place), as its primary function. In addition, the Kern River Parkway Master Plan indicates that the primary river channel is the "area that is located within the State's designated floodway and the Kern River Channel Maintenance Program." For the reasons stated above, Alternatives B and C would not result in a Section 4(f) use of the Kern River Parkway.

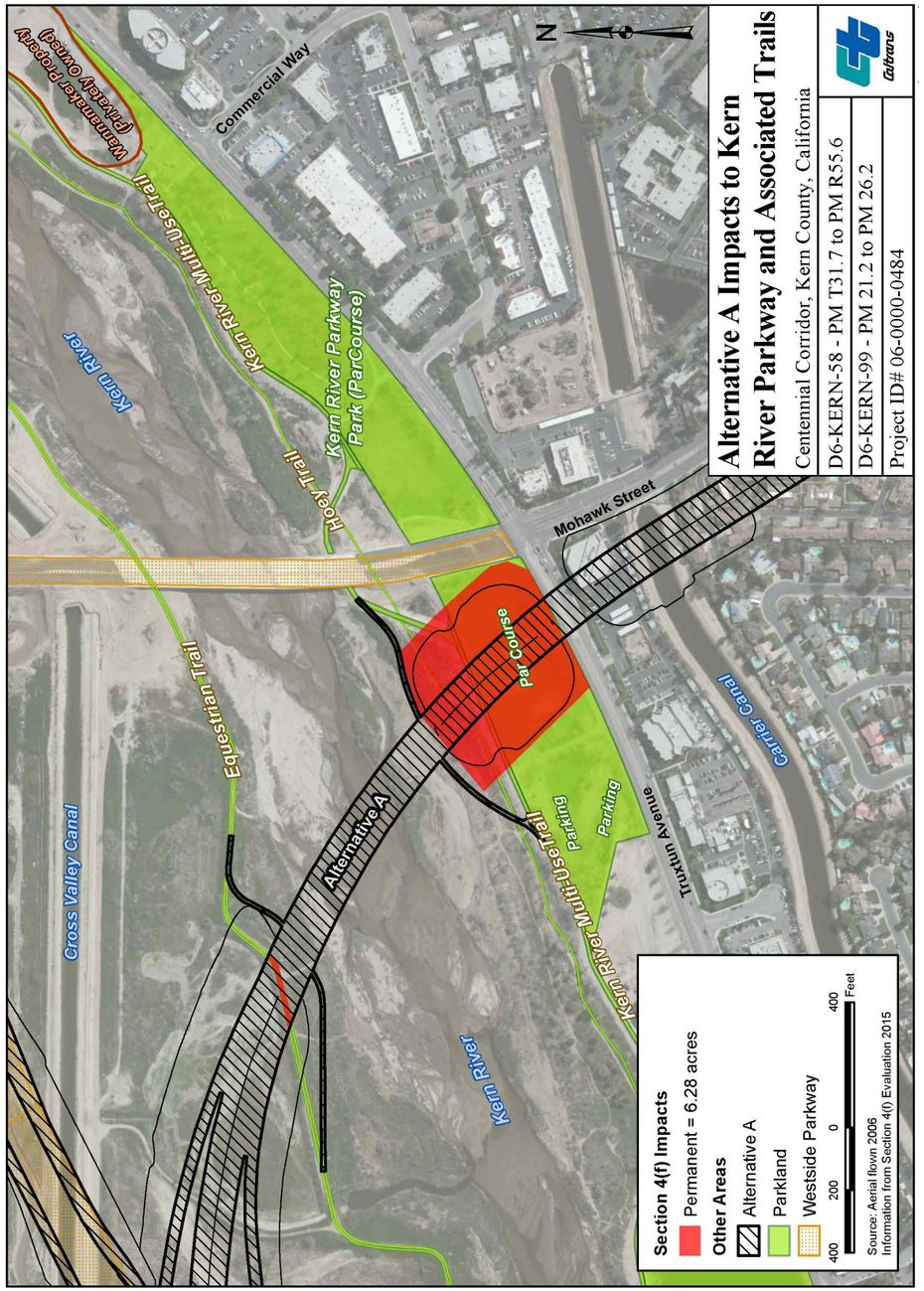


Figure 4 Alternative A Impacts along Kern River Parkway

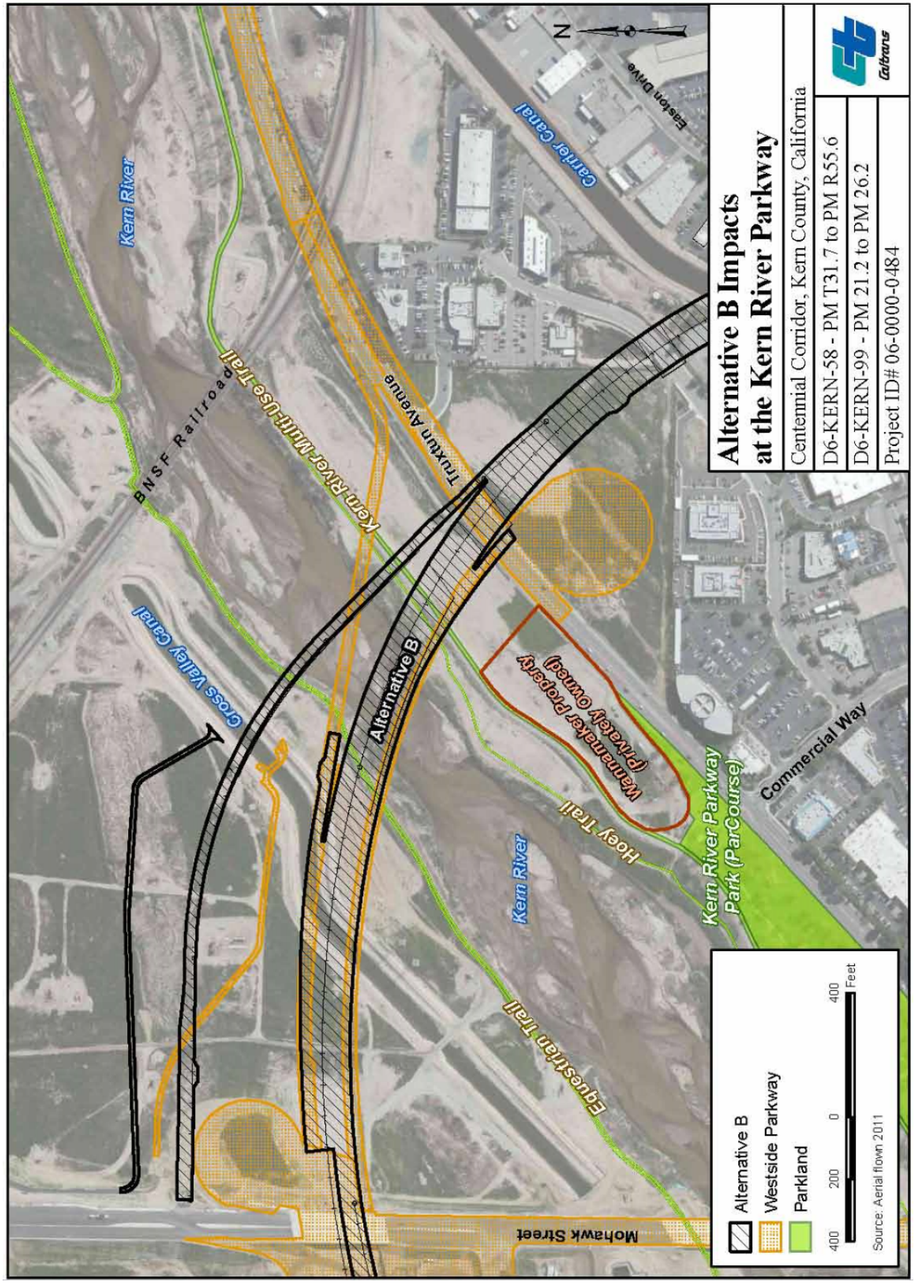


Figure 5 Alternative B (Preferred Alternative) Impacts at the Kern River Parkway

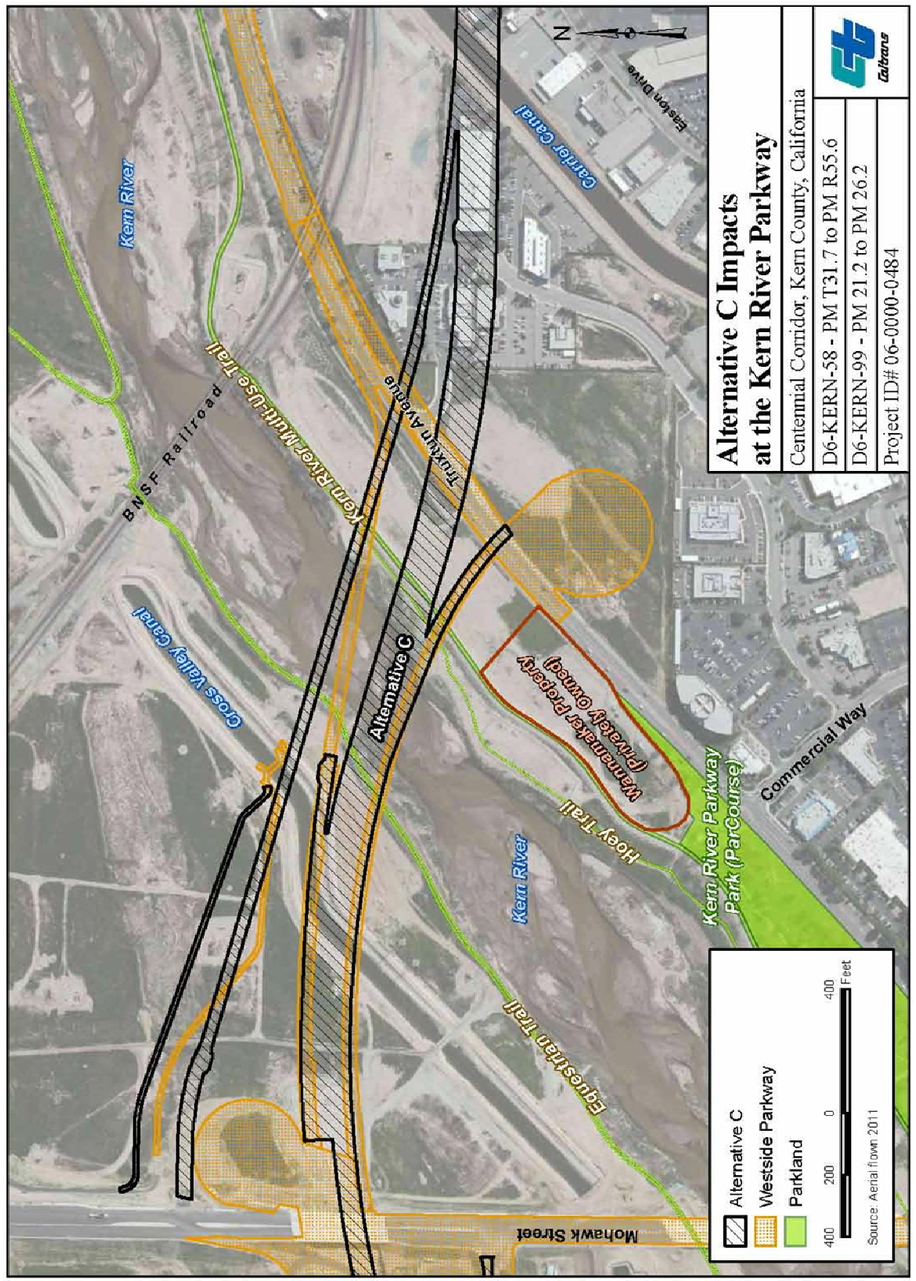


Figure 6 Alternative C Impacts at the Kern River Parkway

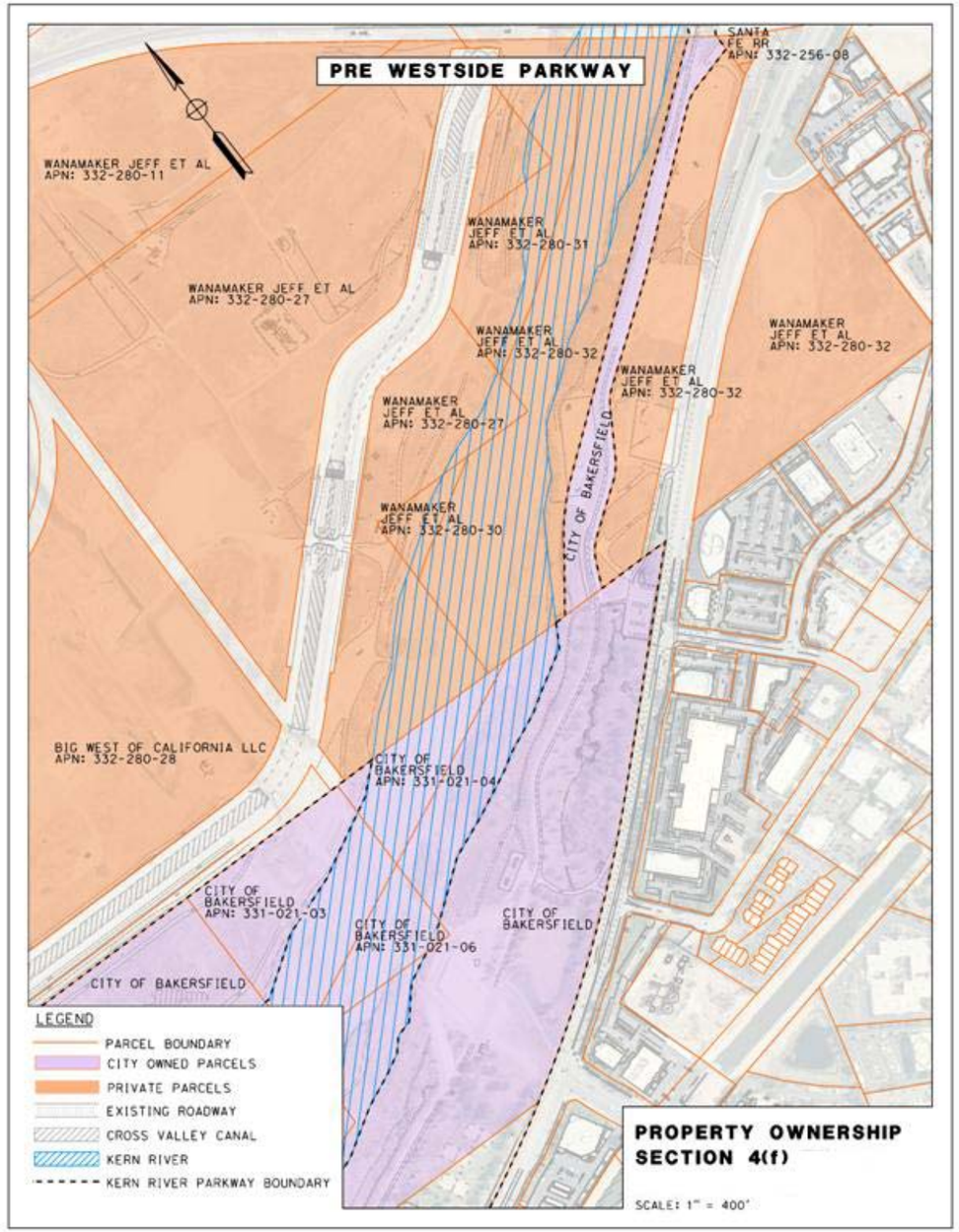


Figure 7 Kern River Parkway Ownership Prior to Westside Parkway Project

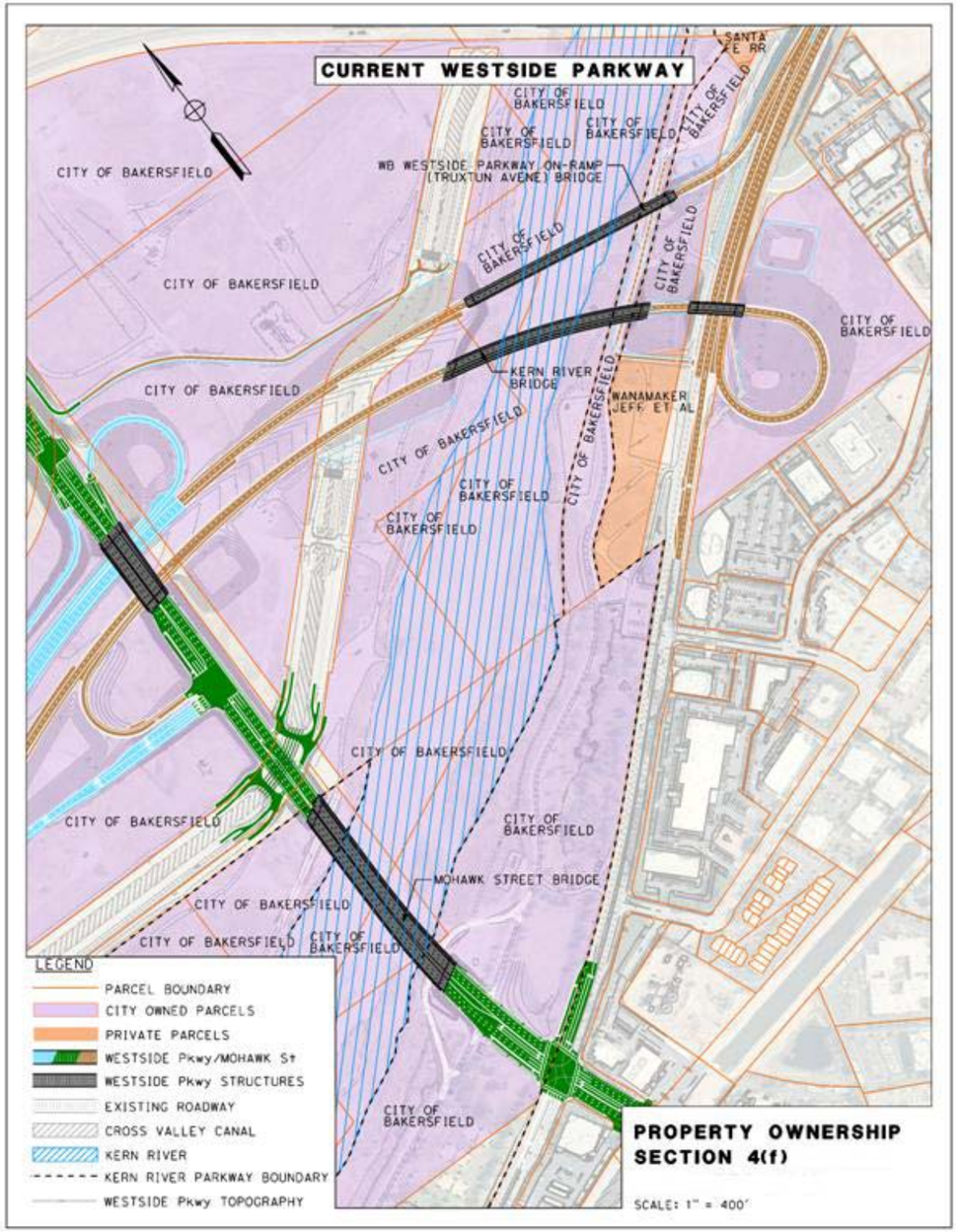


Figure 8 Kern River Parkway Ownership with Westside Parkway Project

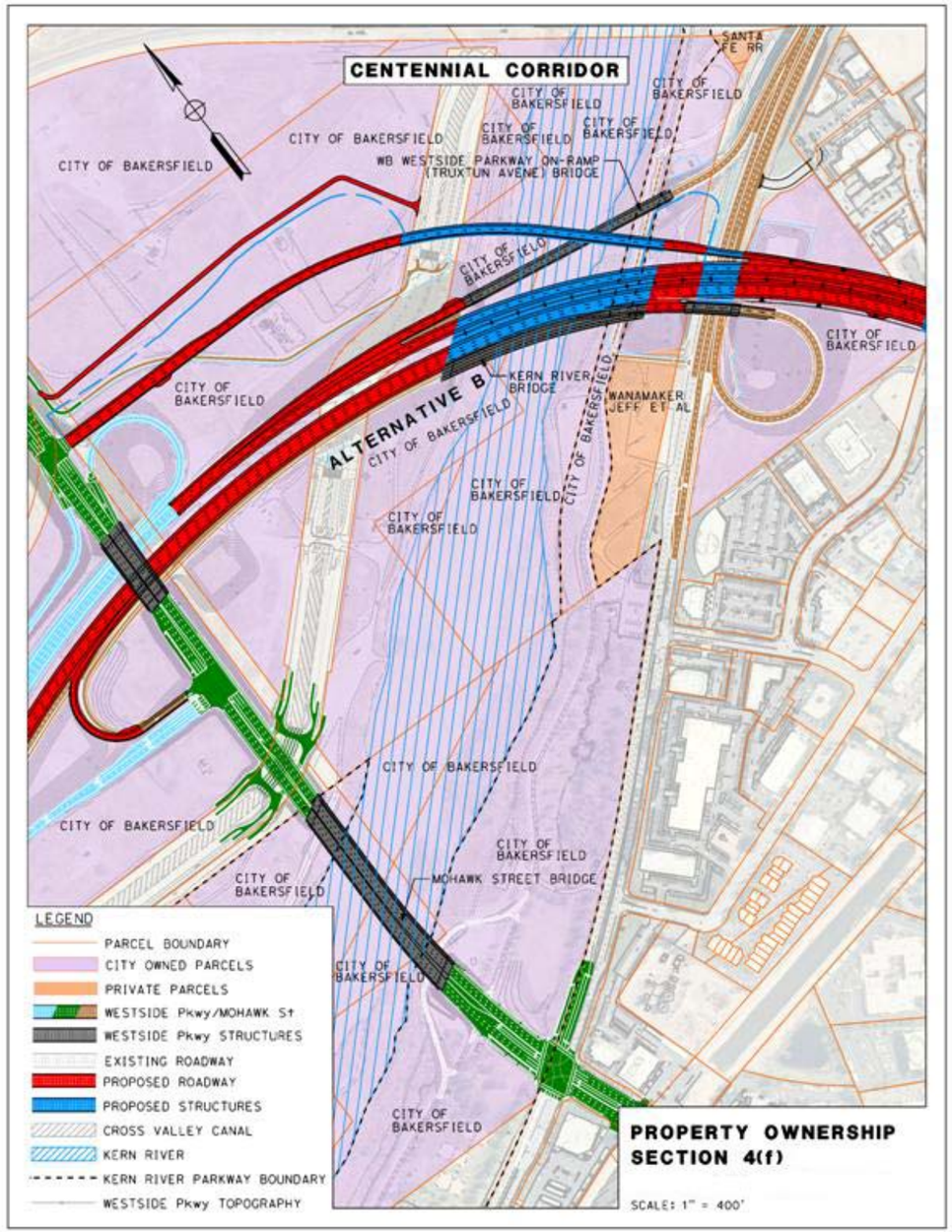


Figure 9 Kern River Parkway Ownership with the Centennial Corridor Project

Accessibility

Building Alternative A would require acquisition of parkland and some associated amenities within the west side of the Kern River Parkway in the immediate vicinity of Mohawk Street and Truxtun Avenue. Although building Alternative A would result in the removal of the three volleyball courts and most of the Frisbee golf course of the Kern River Parkway, access to the equestrian and the Kern River Multi-Use Trail and the Hoey Trail (proposed to be relocated) and the east side of the park would remain. Access to the parkway from Truxtun Avenue to the parking area would also remain unchanged. Construction hours would be 6:00 a.m. to 9:00 p.m. on weekdays and 8:00 a.m. to 9:00 p.m. on weekends, but it would not affect access to the park; therefore, while building Alternative A, access to the park would be maintained.

Building Alternative B and Alternative C would not require acquisition of parkland within the Kern River Parkway. These alternatives would be constructed over the existing Kern River Multi-Use Trail, Hoey Trail, and equestrian trail. Access to the Kern River Multi-Use Trail, Hoey Trail, and equestrian trail would be maintained throughout construction and operation of either of these alternatives. Access to the multi-purpose trail from Truxtun Avenue at this location is not publicly available and, as such, construction activities (planned from 6:00 a.m. to 9:00 p.m. on weekdays and 8:00 a.m. to 9:00 p.m. on weekends) would not affect public access; therefore, with building Alternatives B and C, access to the Kern River Multi-Use Trail, Hoey Trail, and equestrian trail at the Kern River Parkway would be maintained. Alternatives B and C would not directly use the Kern River Multi-Use Trail, Hoey Trail, or equestrian trail. As such, Alternatives B and C would not substantially impair the activities, features, and/or attributes that qualify the parkway for protection under Section 4(f).

Visual

As discussed in the *Visual Impact Assessment* (March 2014) and Section 3.1.7 of the final environmental document, Alternative A would build a new retaining wall and elevated bridge structure for the freeway at Truxtun Avenue and Mohawk Street crossing the Kern River Parkway with a maximum height of 32 feet. The proposed retaining wall and elevated bridge would be a change in the visual environment of the park landscape. The new bridge would change the visual character of the Kern River Parkway because the built structure would encroach on the natural landscape. There would be a decrease in the overall visual quality with the implementation of Alternative A. The view through the Kern River Parkway at this location would be interrupted by the new transportation facility. However, there are existing urban improvements (Westside Parkway, Mohawk Street bridge, a petroleum tank farm, and

transmission towers) adjacent to the Kern River Parkway which alter and impede the existing visual environment of the park and Kern River area. Because of these existing structures, the views to and from the Kern River Parkway would be minimally adversely affected with the construction of Alternative A. The Kern River Parkway at this location is no longer in a pristine natural condition. Therefore, visual changes as a result of the proposed transportation improvements will not substantially impair the activities, features, and/or attributes that qualify the parkway for protection under Section 4(f).

Alternative B (Preferred Alternative) would build an elevated freeway and ramps between the Kern River and Truxtun Avenue with a maximum height of 36 feet. There would be concrete freeway decking and concrete columns supporting the new transportation facility. Support structures and a portion of the flyover (overcrossing) associated with this alternative would be visible from the parkway. In the area where Alternative B crosses the Kern River Parkway, there are several existing structures that alter the views of the users of the Kern River Multi-Use Trail, Hoey Trail, and equestrian trail. These structures include the Westside Parkway, the railroad bridge, utility lines, and oil facilities. Also, during the public circulation of the draft environmental document, several members of the public expressed a desire that improved pedestrian and bicycle connections to the Kern River Parkway be made part of the project. Caltrans has revised the preliminary design plans to include a multi-use pathway that will run parallel to the Preferred Alternative B alignment, connecting California Avenue to Commerce Drive. As part of this modification, an approximately 100-foot long bridge over the Carrier Canal would be constructed to accommodate bicycles and pedestrians. This multi-use pathway and bridge structure will provide direct connectivity to the Kern River Parkway Bike Trail for its users. While there would be adverse changes to views at the Kern River Parkway as a result of building Alternative B, the changes would not substantially impair the activities, features, and/or attributes that qualify the parkway for protection under Section 4(f) because the view is already altered by existing structures and the park users would see the views of the new freeway for only a moderate period of time.

The visual impacts from Alternative C would be similar to those described for Alternative B, with a maximum height of the elevated freeway of 34 feet. While there would be adverse changes to views at the Kern River Parkway as a result of building Alternative C, the changes would not substantially impair the activities, features, and/or attributes that qualify the parkway for protection under Section 4(f) because the view is already altered by existing structures and the park users would see the views of the new freeway for only a moderate period of time.

Noise

Alternative A would be a freeway alignment that crosses over the Kern River Parkway. Areas of frequent human use in recreational areas require analysis for potential noise impacts. In the case of Alternative A, the areas of the park such as the volleyball courts and Frisbee golf course where people remain for longer periods would be removed. Therefore, no traffic noise impact analysis was done for the park. There are multi-use and equestrian trails crossing the proposed alignment. Noise impacts are not evaluated for these trails because of their transient use and because there are no gathering places along the trails.

For Alternatives B and C, freeway alignments would be constructed crossing over the Kern River Parkway. There are no areas of frequent human use in the Kern River Parkway where Alternatives B and C cross the parkway; therefore, no traffic noise impact analysis has been conducted for these areas and is not required. These alternatives would not substantially impair the activities, features, and/or attributes that qualify the parkway for protection under Section 4(f).

Vegetation and Wildlife

As discussed in the *Natural Environment Study* (April 2015) and Section 3.3 of the final environmental document, San Joaquin kit fox dens, or signs such as scat, were observed within the Kern River Parkway grasslands near Mohawk Street within the area proposed for Alternative A construction. The analysis concluded that standard construction-related avoidance and minimization measures and additional conservation measures would be expected to substantially reduce the potential for take and would compensate for residual effects.

As discussed in the *Natural Environment Study* (April 2015) and Section 3.3 of the final environmental document, San Joaquin kit fox dens, or signs such as scat, were observed within the Kern River Parkway grasslands near Mohawk Street about 0.5 mile from Alternatives B and C. These alternatives would not substantially impair the activities, features, and/or attributes that qualify the parkway for protection under Section 4(f).

Air Quality

The *Air Quality Study Report* (February 2014) and Section 3.2.6 of the final environmental document concluded that, in the long term, impacts from Alternatives A, B, and C would not contribute substantially to, or cause deterioration of, air quality in the immediate project area or in the region. In addition, during project construction activities, measures such as best available control and standard control measures required by Caltrans and the San Joaquin Valley Air Pollution Control District would

be used to reduce exhaust and fugitive dust emissions generated by construction equipment and activities. Therefore, the short-term and long-term air quality impacts associated with Alternatives A, B, and C would not substantially impair the activities, features, and/or attributes that qualify the park for protection under Section 4(f).

Water Quality

The discussion and analysis in this section is based on the following technical studies prepared for the Centennial Corridor: *Water Quality Assessment Report* (March 2014); *Drainage Report* (January 2012); and the *Storm Water Data Report* (November 2012) and Section 3.2.2 of the final environmental document. Building Alternatives A, B, or C has potential to affect water quality.

Potential pollutant sources associated with the construction phase of these alternatives include construction activities and materials expected at the project site: vehicle fluids, concrete and masonry products, landscaping and other products, and contaminated soils. Similarly, operation of these alternatives has the potential to affect water quality. Potential pollutant sources associated with operation of the proposed project include motor vehicles, highway maintenance, illegal dumping, spills, and landscaping care; however, using minimization measures, short-term and long-term water quality impacts associated with Alternatives A, B, and C would not substantially impair the activities, features, and/or attributes that qualify the parkway for protection under Section 4(f).

Under Preferred Alternative B, the Kern River Parkway would not be impacted. Therefore, the provisions of Section 4(f) are not triggered.

5.2.2 Saunders Park

Alternatives A and B are about 0.5 mile from Saunders Park; therefore, they would not have an impact on this park. As a result, no direct or temporary use of this property would occur from either of these two alternatives. Alternative C, however, as described below, would have permanent use of up to 3.27 acres of park property.

Accessibility

The park could be accessed during project construction as well as when the project is operational.

Visual

Saunders Park is surrounded by residential neighborhoods with mature trees and other vegetation to the south and the west of the park. There are approximately 0.5 miles of mature trees and residential properties between Saunders Park and Alternatives A and B. The distance of the two alternatives from the park, combined with the built-out

residential neighborhoods with mature trees mean Alternatives A and B would not be visible from the park. Therefore, Alternatives A and B would not substantially impair the activities, features, and/or attributes that qualify the park for protection under Section 4(f).

Noise

Traffic noise impacts are determined by factors such as distance from the highway, traffic volumes, traffic speeds, traffic types, ground absorption, atmospheric absorption, and meteorological effects like temperature and humidity. As distance increases from the highway, noise level drops. Generally, when distance doubles, noise level declines about 3 dB when it travels over hard sites like asphalt. Over soft sites such as grass, when distance doubles, the noise level declines about 4.5 dB (see Figure 10).

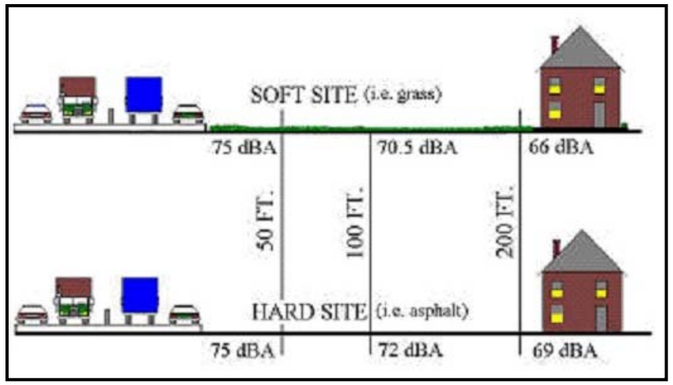


Figure 10 Graphic Representation of Noise Level Declines Over Hard and Soft Sites

The current highway traffic noise prediction model TNM has been validated 0 to 500 feet from the highway. Receptors beyond 500 feet from the project area would not be considered for analysis unless a reasonable expectation exists that noise impacts would extend beyond that boundary. It is clear that the perception of noise at any of the parks and schools, as contributed to from the project alternatives, would be reduced by the combined factors of nearby noise, distance and intervening barriers such that no increase in existing ambient noise would be perceptible. As a result, none of the alternatives would substantially impair the activities, features, and/or attributes that qualify the park for protection under Section 4(f).

Vegetation and Wildlife

Saunders Park is generally landscaped with non-native plant material. These plant materials are expected to provide very low to no value and function for wildlife (refer to Section 3.3 of the final environmental document). Though the park provides open space, the site is surrounded by urban development further reducing its habitat value. Saunders Park does not serve as a link in a regional wildlife travel corridor. There were no signs (such as scat) or potential dens associated with the San Joaquin kit fox in the vicinity of Saunders Park (*Biological Assessment* November 2012). As a result, none of the alternatives would substantially impair the activities, features, and/or attributes that qualify the park for protection under Section 4(f).

Air Quality

Regarding air quality, dispersion modeling results show that increases in particulate matter, if any, would only occur at distances near the project alternatives. No increases beyond a typical distance of 500 feet would be expected. Therefore, at distances of 0.25 to 0.5 mile (1,320 to 2,640 feet) from the project alternatives, no adverse air quality effects would be expected. In addition, during project construction activities, measures such as best available control and standard control measures as required by Caltrans and the San Joaquin Valley Air Pollution Control District would be used to reduce exhaust and fugitive dust emissions generated by construction equipment and activities. Therefore, short-term and long-term air quality impacts associated with any of the alternatives would not substantially impair the activities, features, and/or attributes that qualify the park for protection under Section 4(f).

Water Quality

Potential short-term water quality impacts associated with the construction phase of the Centennial Corridor Project would be minimized with the implementation of Construction Site Best Management Practices. Potential long-term water quality impacts associated with the operation and maintenance of the transportation facility would be minimized with the implementation of Treatment Best Management Practices. Preliminary engineering efforts have identified proposed Infiltration Device locations to address water quality impacts. Overall, with incorporation of Temporary and Permanent Best Management Practices, no water quality impacts are expected with implementation of the Centennial Corridor Project. Consequently, impacts to water quality as a result of the proposed project alternatives would not substantially impair the activities, features, and/or attributes that qualify the park for protection under Section 4(f).

As shown in Figure 11, Alternative C would result in partial acquisition of the park for the permanent use of that portion of Saunders Park. Permanent impacts include 1.95 acres of developed park land and 1.32 acres of undeveloped park land between the existing retention basin and State Route 99 for a total of 3.27 acres. The following park amenities or facilities would be permanently removed: on-site surface parking (58 spaces); two basketball courts; enclosed roller hockey arena; a retention basin; splash/water play area; equipment storage room; and several mature trees.

Accessibility

Building Alternative C would require partial acquisition of parkland at Saunders Park; however, access to Saunders Park via Palm Street would be maintained at all times during construction and operation of this alternative. Off-street parking would be available on Palm Street during construction. Construction hours would be 6:00 a.m. to 9:00 p.m. on weekdays and 8:00 a.m. to 9:00 p.m. on weekends. With building Alternative C, access to Saunders Park would be maintained and would not substantially impair the activities, features, and/or attributes that qualify the park for protection under Section 4(f).

Visual

As discussed in the *Visual Impact Assessment* (March 2014) and Section 3.1.7 of the final environmental document, Alternative C would include building a new elevated freeway and associated retaining wall. In addition, a sound wall would be built on top of the retaining wall to attenuate traffic noise. This alternative would also remove some mature trees within the park.

The proposed freeway, retaining wall and sound wall parallel to existing State Route 99 would be a substantial change in the visual landscape of the park. The visual character of Saunders Park would be affected by the removal of land and a new retaining wall and sound wall placed on the outside of the parking lot perimeter. There would, therefore, be adverse changes to the view with building Alternative C. In addition, during construction, park patrons and adjacent residents would be exposed to views of construction vehicles; construction-related vehicle access; staging of construction materials; grading and road and sidewalk construction; temporary safety barriers; and temporary lighting. However, Saunders Park is nestled in a suburban neighborhood surrounded by State Route 99, tract housing, and a fire station. Community residents use the park primarily for basketball, picnicking, roller hockey, and other common activities associated with a local park. This park was built for the neighborhood and does not contain natural features, such as wildlife, rivers

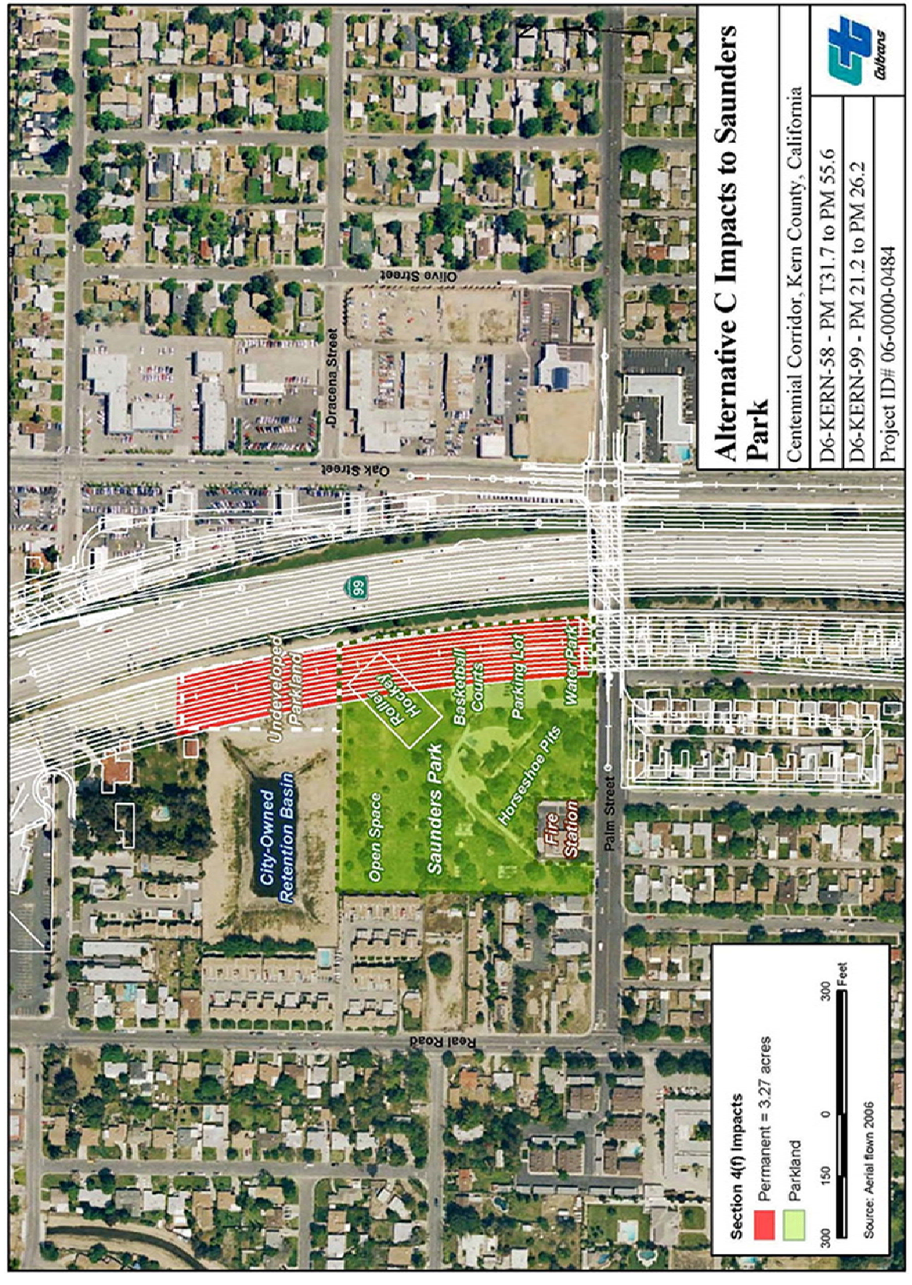


Figure 11 Alternative C Impacts at Saunders Park

and creeks, rock formations, and vast open space. Therefore, construction of Alternative C would not substantially impair the activities, features, and/or attributes of Saunders Park.

While there would be adverse changes to the views at Saunders Park as a result of Alternative C, building this alternative would not substantially impair the activities, features, and/or attributes of the remaining portions of the park that qualify the park for protection under Section 4(f).

Noise

As noted in the *Noise Study Report* (March 2014) and Section 3.2.7 of the final environmental document, Alternative C would require building an elevated freeway crossing and associated retaining wall that would form the eastern park boundary. Existing noise levels at the park range from 59 to 62 A-weighted dB (levels similar to heavy traffic at 300 feet) but would increase by 8 to 11 dB with implementation of Alternative C. Park patrons may therefore experience noise levels ranging from 69 to 72 dB (levels similar to the operation of a gas lawnmower at 30 feet) prior to mitigation. To abate this increase in noise levels, a sound wall would be built on top of the retaining wall. With the sound wall in place, noise levels at the park are anticipated to be 64 dB, which would be an increase of 2 to 5 dB above existing conditions.

The noise levels from construction activities would be short term and intermittent (coming and going); therefore, they would not affect park patrons. Project noise levels from temporary construction activities and from long-term traffic use along the elevated freeway crossing associated with Alternative C would not substantially impair the activities, features, and/or attributes that qualify the park for protection under Section 4(f).

Vegetation and Wildlife

Saunders Park is generally landscaped with non-native plant material. These plant materials are expected to provide very low to no value and function for wildlife (refer to Section 3.3 of the final environmental document). Though the park provides open space, the site is surrounded by urban development further reducing its habitat value. Saunders Park does not serve as a link in a regional wildlife travel corridor. There were no signs (such as scat) or potential dens associated with the San Joaquin kit fox in the vicinity of Saunders Park (*Natural Environment Study* April 2015). As a result, Alternative C would not substantially impair the activities, features, and/or attributes that qualify the park for protection under Section 4(f).

Air Quality

The *Air Quality Study Report* (February 2014) and Section 3.2.6 of the final environmental document concluded that, in the long term, Alternative C would not contribute substantially to, or cause deterioration of, air quality in the immediate project area or in the region. In addition, during project construction activities, measures such as best available control and standard control measures as required by Caltrans and the San Joaquin Valley Air Pollution Control District would be used to reduce exhaust and fugitive dust emissions generated by construction equipment and activities. Therefore, the short-term and long-term air quality impacts associated with Alternative C would not substantially impair the activities, features, and/or attributes that qualify the park for protection under Section 4(f).

Water Quality

The discussion and analysis in this section are based on the following technical studies prepared for the Centennial Corridor: *Water Quality Assessment Report* (March 2014); *Drainage Report* (November 2012); and the *Storm Water Data Report* (January 2012) and Section 3.2.2 of the final environmental document. Building Alternative C has the potential to affect water quality.

Potential pollutant sources from the building phase of this alternative include construction activities and materials expected at the project site: vehicle fluids; concrete and masonry products; landscaping and other products; and contaminated soils. Similarly, operation of this alternative has the potential to affect water quality. Potential pollutant sources associated with operation of this alternative include motor vehicles, highway maintenance, illegal dumping, spills, and landscaping care; however, with minimization measures, short-term and long-term water quality impacts associated with Alternative C would not substantially impair the activities, features, and/or attributes that qualify the park for protection under Section 4(f).

5.2.3 Rancho Vista Historic District

Alternative A construction of State Route 58 would pass through the center of the Rancho Vista Historic District on an elevated structure with a maximum height of 43 feet (at the Stine Road Undercrossing) and remove 46 of the 81 residences that contribute to the Rancho Vista Historic District's significance and 16 of the 27 residences that do not contribute. Removing 46 contributing residences would be a permanent use of the Rancho Vista Historic District (see Figure 12). Alternative A would require one partial acquisition (562 square feet) of a noncontributing property and no partial acquisitions of contributing properties. Alternative A would not result

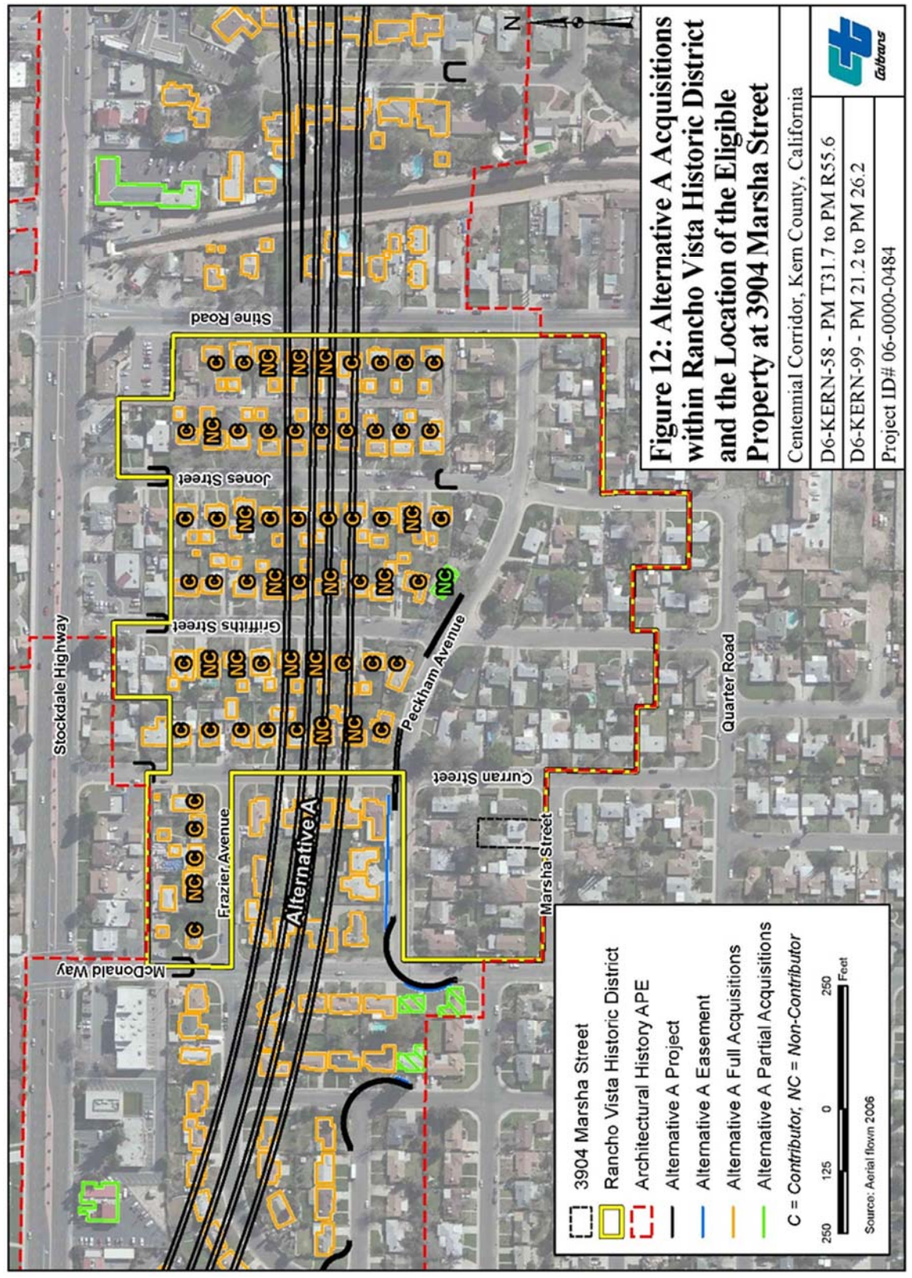


Figure 12 Alternative A Acquisitions within Rancho Vista Historic District

in the temporary occupancy of land from the Rancho Vista Historic District for temporary construction easements during construction. Building Alternative A would result in a permanent use of this historic district by physically destroying or damaging contributing elements and character-defining features of the Rancho Vista Historic District.

The Alternative B alignment, the Preferred Alternative, would be located about 110 feet away from the nearest contributing residence within the Rancho Vista Historic District, with a sound wall of approximately 12 to 16 feet in height being proposed, located approximately 70 feet from the closest edge of the historic property boundary (see Figure 13). Alternative B would not result in a direct use of the Rancho Vista Historic District because no properties within the Rancho Vista Historic District boundary would be acquired for this alternative. In addition, the property is located in an urbanized environment characterized largely by such elements as single-story houses with uniform setbacks, mature landscaping and trees, roadways, power poles and transmission lines, fencing and other neighborhood features. The Rancho Vista Historic District experiences typical periodic noise associated with neighborhood activities, such as gardening equipment, music, barking dogs, and so forth, along with those more prominent sounds generated by nearby roadway traffic, including the large number of trucks and cars traveling on the nearby Stockdale Highway. While traffic noise would increase with construction of Alternative B, the property qualifying as a Section 4(f) property (a postwar housing tract) is not a property whose significance derives from being located in a quiet setting. Noise-related proximity impacts would not substantially change the feeling, association or atmosphere of the Section 4(f) property to the point where the activities, features, or attributes of the historic district would be substantially impaired. Moreover, the proposed sound wall would reduce noise impacts generated by the project. Although the elevated roadway would alter the views from some perspectives, particularly for those looking from streets located immediately south of the new freeway or close to the northeasterly boundary of the historic property, from other parts of the historic district the freeway structure or sound wall would not be as obtrusive. As discussed below in an analysis of Alternative B, it is concluded that the proximity impacts would not substantially impair the activities, features, and attributes that qualify the Section 4(f) property under 23 CFR 774.15(f) and therefore would not constitute a constructive use.

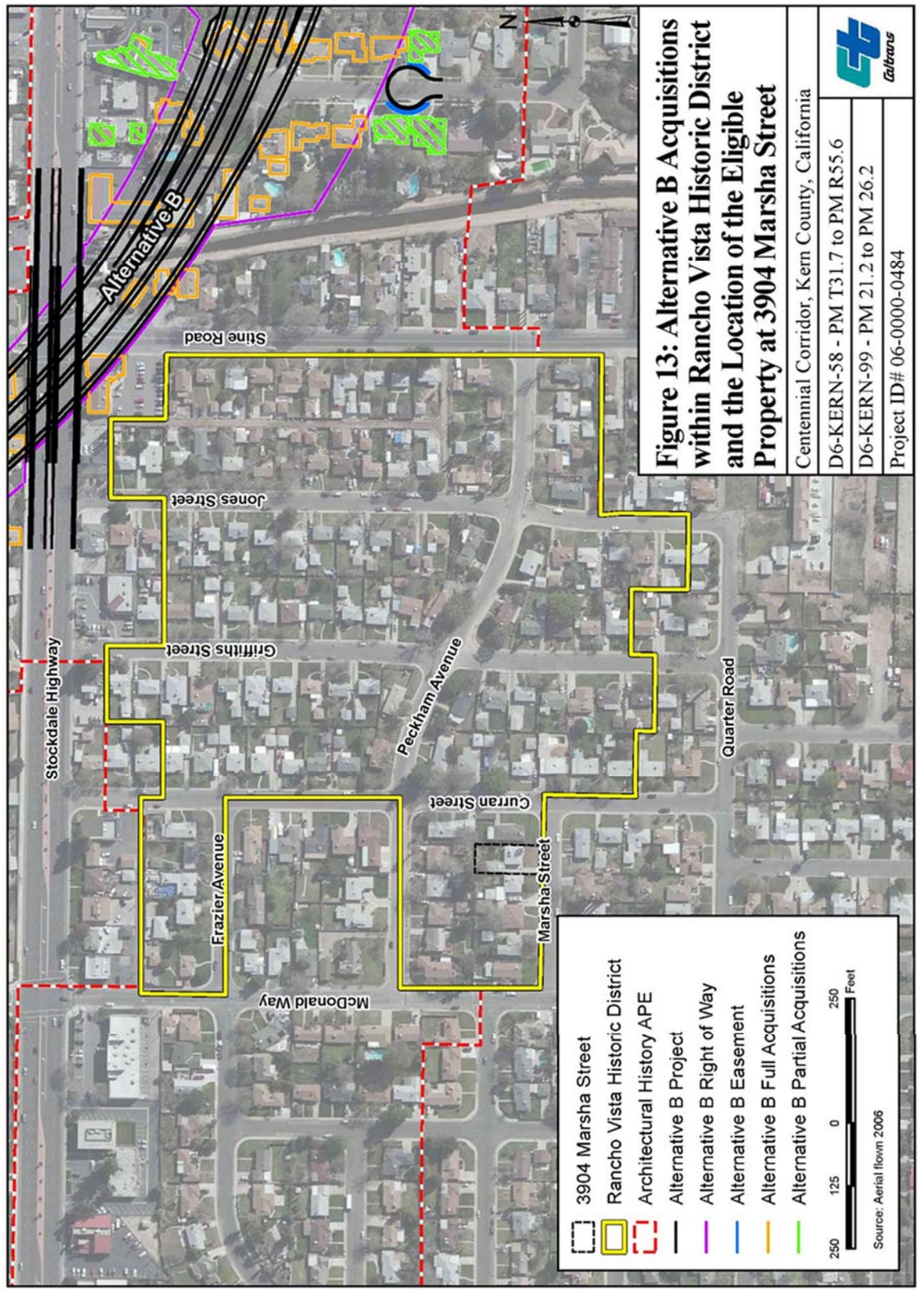


Figure 13 Alternative B Acquisitions within Rancho Vista Historic District

Alternative C is located about 1,300 feet west from the Rancho Vista Historic District at its closest boundary edge. Alternative C would not result in a direct use of the Rancho Vista Historic District because no properties within the Rancho Vista Historic District boundary would be acquired for this alternative.

Table B.2 summarizes the anticipated temporary construction easements, partial acquisitions, and full acquisitions under Alternatives A, B and C for the Rancho Vista Historic District.

Table B.2 Summary of Permanent Uses and Temporary Occupancies at the Rancho Vista Historic District

Alternative A			Alternative B (Preferred Alternative)			Alternative C		
Number of Full Contributing Parcel Acquisitions	Number of Partial Contributing Parcel Acquisitions (total square feet)	Number of Parcels with Temporary Construction Easements (total square feet)	Number of Full Contributing Parcel Acquisitions	Number of Partial Contributing Parcel Acquisitions (total square feet)	Number of Parcels with Temporary Construction Easements (total square feet)	Number of Full Contributing Parcel Acquisitions	Number of Partial Contributing Parcel Acquisitions (total square feet)	Number of Parcels with Temporary Construction Easements (total square feet)
46	0	0	0	0	0	0	0	0

Accessibility

Building Alternative A would require full and partial property acquisitions from the Rancho Vista Historic District. Although building Alternative A would result in property acquisitions, access to the Rancho Vista Historic District would be maintained via Stine Road, McDonald Way, Curran Street, Griffiths Street, and Jones Street. Construction hours would be 6:00 a.m. to 9:00 p.m. on weekdays and 8:00 a.m. to 9:00 p.m. on weekends. With building Alternative A, access to the Rancho Vista Historic District would be maintained and the alternative would not substantially impair the activities, features, and/or attributes that qualify the Rancho Vista Historic District for protection under Section 4(f).

It should be noted that accessibility impacts associated with Alternatives B and C are not discussed because these alignments are outside the Rancho Vista Historic District boundaries and would not affect contributing properties. As such, impacts from these alternatives would not substantially impair the activities, features, and/or attributes that qualify the Rancho Vista Historic District for protection under Section 4(f).

Visual

Alternative A

Alternative A would require building a retention basin, a 24- to 30-foot-high elevated roadway, and sound walls up to 12 feet high at the Rancho Vista Historic District.

The proposed roadway alignment height—bridge with sound wall—would range between 34 feet (24-foot fill slope + 10 foot sound wall) to a maximum height of 43 feet (bridge deck at 32 feet – 1.5 foot super elevation + 12-foot sound wall) above Stine Road. As discussed in the *Visual Impact Assessment* (March 2014) and Section 3.1.7 of the final environmental document, Alternative A would build a cul-de-sac at the end of McDonald Way and Peckham Avenue and a chain-link fence in front of a landscaped slope leading to an elevated freeway and sound wall south of Stockdale Highway crossing McDonald Way. The new freeway would introduce a new substantial above-grade structure into the residential area. The existing character of the area would change from a quiet residential street to a large-scale freeway.

The Alternative A alignment would traverse the center of the Rancho Vista Historic District. The construction of an elevated freeway structure would also introduce a visual intrusion that would not be in keeping with the character and setting of the Rancho Vista Historic District. Photo 1 shows the existing view of the Rancho Vista Historic District (taken at Stine Road near Peckham Avenue looking toward Alignment A) compared to the simulated view of the future condition with Alignment A in place.

Alternative B (Preferred Alternative)

Alternative B, the Preferred Alternative, would result in an elevated roadway with a sound wall built immediately northeast of the Rancho Vista Historic District (see Figures 14 and 15). The proposed roadway would include a bridge that spans the Stine Canal, Stine Road, and Stockdale Highway. The bridge height would be about 38 feet, and the proposed sound wall would be 12 to 16 feet in height. Together, the bridge and sound wall would be roughly the height of a four-story building.

The elevated roadway structure would alter some views when looking east and northeast from street level from the Rancho Vista Historic District. The new infrastructure would be visible from some of the spatial gaps between the houses and trees and from certain city streets. Photo 2 illustrates the existing view and simulated view of the Rancho Vista Historic District from Stine Road. Photo 3 illustrates the existing view and simulated view of the Rancho Vista Historic District from Jones Street).

Existing View

Simulated View with Alternative A

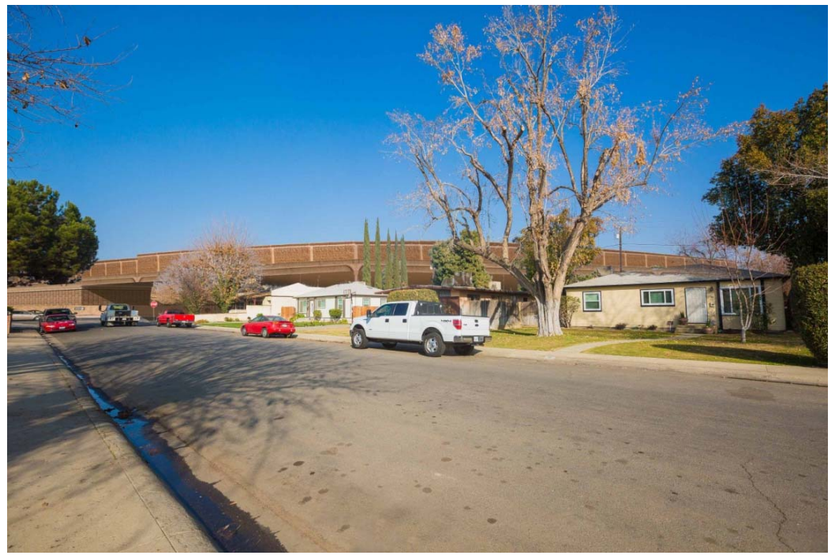
Photo 1. Rancho Vista Historic District taken from Stine Road and Peckham Street looking north toward Alternative A Alignment

Existing View

Simulated View with Alternative B

Photo 2. Rancho Vista Historic District taken from Stine Road four houses north of Peckham Street looking north toward Alternative B Alignment

Existing View



Simulated View with Alternative B

Photo 3. The Rancho Vista Historic District taken from Jones Street south of Stockdale Highway looking northeast toward Alternative B Alignment

The Rancho Vista Historic District is eligible for the National Register as a significant example of a planned postwar residential subdivision with houses built using innovative whole-house prefabrication techniques, and a setting of mature landscaping and houses setback from the curbs in a uniform manner. The integrity of location, design, materials, and workmanship would remain the same. The historic association and identity of the historic property as a postwar residential housing tract and its contributing features would remain unchanged under Alternative B. However, the introduction of an elevated structure would cause a visual intrusion and be out of character with the historic district's residential setting and is therefore considered to be an adverse effect under Section 106. As a result, Caltrans has consulted with the State Historic Preservation Officer and other consulting parties on development and execution of a Memorandum of Agreement to identify measures to minimize or eliminate the adverse visual effects on the historic property. The Memorandum of Agreement is included in Appendix J, Volume 2.

Adverse effects under Section 106 and constructive use under Section 4(f) are not equivalent. Adverse effects can occur when a project would bring about a change in the setting of the historic property, but that does not touch that historic property. Notwithstanding an adverse effect determination, the Section 4(f) regulations limit constructive use to circumstances where a "project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired." [23 CFR 774.15(a)]

One way to measure "substantial impairment" is to consider the National Register eligibility status of the property in a before-and-after exercise scenario. Alternative B, the Preferred Alternative, would have an elevated structure and sound wall built directly adjacent to the boundary of the Rancho Vista Historic District. Caltrans has determined, with concurrence by the California State Historic Preservation Officer, that a diminishment in the setting of the historic property would result in an adverse effect. Yet, it would be highly likely that the Rancho Vista Historic District would remain eligible for inclusion in the National Register after the project is constructed, and therefore still be considered a section 4(f) property. The Rancho Vista Historic District would still have most all of the historical spatial relationships existing between the various district contributors and the larger urban landscape in which the property is situated. Access within the neighborhood would not change. The historic district would still function as a cohesive residential neighborhood and the effects of constructing an aerial structure would not result in the physical loss of any of its contributing elements. As a point of comparison, this would not be the case with

implementation of Alternative A, which would permanently divide the Rancho Vista Historic District, and require acquisition and removal of 46 of the 81 property's district contributors. In such a case, the Rancho Vista Historic District would not remain eligible for the National Register.

An extreme example of "substantial impairment" as called for by the Section 4(f) definition of constructive use might be a proposed transportation facility in such close proximity to a historic property type that particularly derives its significance in large part due to its setting, such as a historic lighthouse or a historic farmstead, to give two representative examples. While every historic property's setting has some weight of importance as one of the factors for measuring integrity, a key consideration for eligibility for the National Register of Historic Places, they are not equal in terms of what might be considered a substantial impairment to them as part of the protected activities, features, or attributes that qualify the property for protection under Section 4(f).

Thus, constructive use could only occur if the views of, or from the Rancho Vista Historic District were a protected activity, feature, or attribute of the historic resource. Therefore, there would be no use of the Section 4(f) historic property.

Alternative C

Alternative C is not near the Rancho Vista Historic District; therefore, it would have no impact on the Rancho Vista Historic District and would not substantially impair the activities, features, and/or attributes that qualify the Rancho Vista Historic District for protection under Section 4(f).

Noise and Vibration

Alternative A would require sound walls up to 12 feet high that bisect the Rancho Vista Historic District which would result in a direct use, as described earlier, but the reduced noise levels after construction would not substantially impair the activities, features, and/or attributes that qualify the Rancho Vista Historic District for protection under Section 4(f).

Alternative B, the Preferred Alternative, would build a bridge over Stine Canal, Stine Road, and Stockdale Highway. Long term noise measurements in this area ranged from 59 to 63 decibels. Future traffic noise levels at these locations, with the project, are predicted to range from 65 to 70 decibels. As such, a 10- to 14-foot-high sound wall is proposed along this area (see Figure 14). The sound wall is expected to provide a traffic noise reduction of up to 5 decibels. Therefore, with noise abatement,

future traffic noise levels would be below the Caltrans Traffic Noise Analysis Protocol Noise Abatement Category Criterion of 67 dBA. Noise abatement resulting from construction of the sound walls at this location would reduce potential noise impacts to the Rancho Vista Historic District or associated contributors; therefore, construction of this alternative would not substantially impair the activities, features, and/or attributes that qualify the Rancho Vista Historic District for protection under Section 4(f).

Because Alternative C is not near the Rancho Vista Historic District, it would have no potential noise or vibration impacts on the Rancho Vista Historic District and it would not substantially impair the activities, features, and/or attributes that qualify the Rancho Vista Historic District for protection under Section 4(f).

Vegetation and Wildlife

The contributing properties within the Rancho Vista Historic District generally have mature landscaping, which was likely planted for shade and ornamental purposes when the residential buildings were originally constructed. This mature landscaping is considered a character-defining feature of the Rancho Vista Historic District; however, these plant materials are expected to provide very low to no value and function for wildlife (refer to Section 3.3 of the final environmental document). Alternative A would remove approximately 20-30 mature trees within the Rancho Vista Historic District from properties that would require full acquisition. There may also be vegetation removed from properties required from partial acquisitions. Removal of the vegetation would not in and of itself substantially impair the activities, features, and/or attributes that qualify the Rancho Vista Historic District for protection under Section 4(f) since any mature trees removed would be replaced at a ratio of 1:1 as set forth under the Visual Resources section of this environmental document.

It should be noted that vegetation and wildlife impacts associated with Alternatives B and C are not discussed because these alignments are outside the Rancho Vista Historic District boundaries; therefore, they would not substantially impair the activities, features, and/or attributes that qualify the Rancho Vista Historic District for protection under Section 4(f).

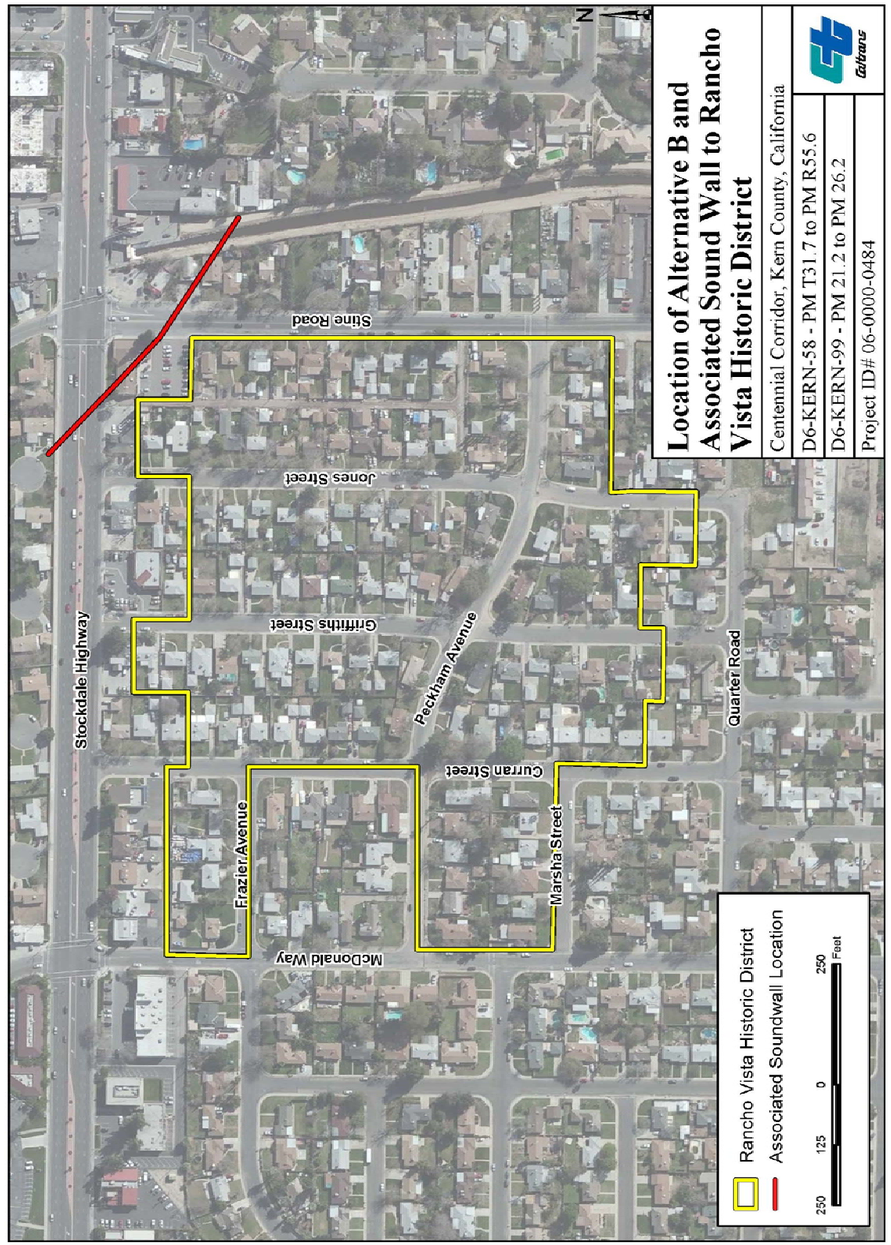


Figure 14 Location of Alternative B and Associated Sound Wall to Rancho Vista Historic District

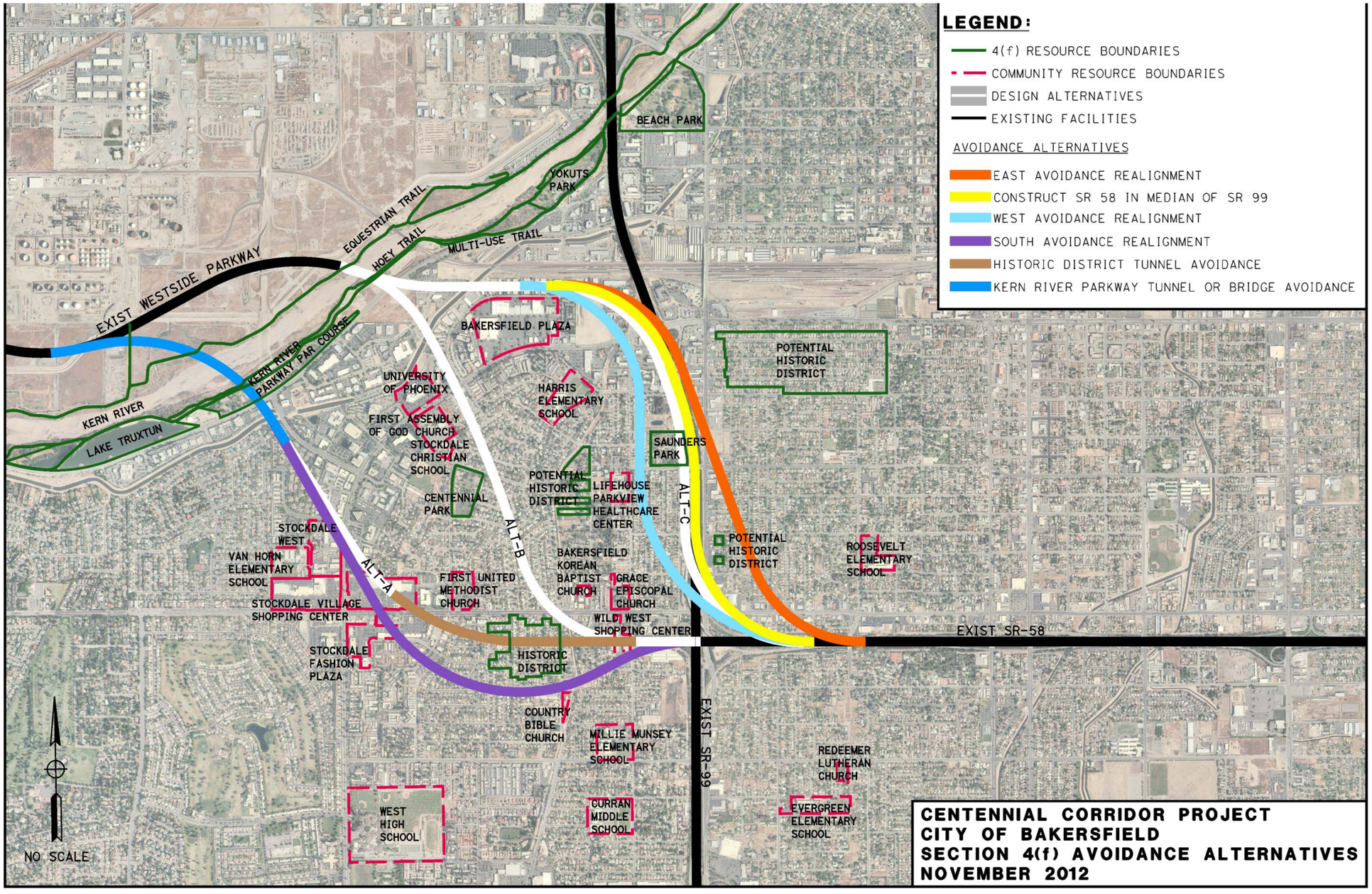


Figure 15 Avoidance Alternatives

Air Quality

The *Air Quality Study Report* (February 2014) and Section 3.2.6 of the final environmental document conclude that, in the long term, Alternatives A and B would not contribute substantially to, or cause deterioration of, air quality in the immediate project area or in the region. In addition, during project construction activities, measures such as best available control and standard control measures as required by Caltrans and the San Joaquin Valley Air Pollution Control District would be used to reduce exhaust and fugitive dust emissions generated by construction equipment and activities. Therefore, the short-term and long-term air quality impacts associated with Alternatives A and B would not substantially impair the activities, features, and/or attributes that qualify the Rancho Vista Historic District for protection under Section 4(f).

It should be noted, although Alternative B, the Preferred Alternative, is located outside of the Rancho Vista Historic District boundaries, air quality impacts were addressed due to the alternative's proximity to the contributing historic properties; however, impacts from this alternative would not substantially impair the activities, features, and/or attributes that qualify the Rancho Vista Historic District for protection under Section 4(f).

Impacts associated with Alternative C are not discussed because this alignment is about 0.5 mile to the east of the Rancho Vista Historic District boundary.

Water Quality

The discussion and analysis in this section is based on the following technical studies prepared for the Centennial Corridor: *Water Quality Assessment Report* (March 2014); *Drainage Report* (November 2012); and the *Storm Water Data Report* (January 2012) and Section 3.2.2 of the final environmental document. Build Alternatives A or B have the potential to affect water quality.

Potential pollutant sources associated with the construction phase of these alternatives include construction activities and materials expected at the project site such as vehicle fluids; concrete and masonry products; landscaping and other products; and contaminated soils. Similarly, operation of this alternative has the potential to affect water quality. Potential pollutant sources associated with operation of this alternative include motor vehicles, highway maintenance, illegal dumping, spills, and landscaping care; however, using minimization measures, short-term and long-term water quality impacts associated with Alternatives A or B are not expected.

It should be noted that although Alternative B is located physically outside of the Rancho Vista Historic District boundaries, water quality impacts have been addressed due to the

alternative's proximity to the contributing historic properties; however, impacts from this alternative would not substantially impair the activities, features, and/or attributes that qualify the Rancho Vista Historic District for protection under Section 4(f).

Impacts associated with Alternative C are not discussed because this alignment is about 0.5 mile to the east of the Rancho Vista Historic District boundary.

6.0 Avoidance Alternatives

6.1 Overview of Avoidance Alternatives

Alternative A would result in the permanent use of the Kern River Parkway and Rancho Vista Historic District Section 4(f) properties. Alternative B, however, would not affect parkland or other properties, including the Rancho Vista Historic District, subject to the provisions of Section 4(f). Alternative C would result in the permanent use of Saunders Park, a Section 4(f) property, but it would not affect other properties, including the Rancho Vista Historic District. As a result, consideration of feasible and prudent alternatives that avoid permanent use of land from these Section 4(f) properties for the effects associated with Alternatives A and C is required.

Analysis of Avoidance Alternatives

This analysis of avoidance alternatives is based on the definition of "feasible and prudent avoidance alternative" in 23 CFR 774.17, which provides the following direction for determining whether an alternative is feasible and prudent:

(1) A feasible and prudent avoidance alternative avoids using Section 4(f) property and does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property. In assessing the importance of protecting the Section 4(f) property, it is appropriate to consider the relative value of the resource to the preservation purpose of the statute.

(2) An alternative is not feasible if it cannot be built as a matter of sound engineering judgment.

(3) An alternative is not prudent if:

- (i) It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;
- (ii) It results in unacceptable safety or operational problems;
- (iii) After reasonable mitigation, it still causes:
  - (A) Severe social, economic, or environmental impacts;

(B) Severe disruption to established communities;
(C) Severe disproportionate impacts to minority or low-income populations; or
(D) Severe impacts to environmental resources protected under other Federal statutes;

(iv) It results in additional construction, maintenance, or operational costs of an extraordinary magnitude;
(v) It causes other unique problems or unusual factors; or
(vi) It involves multiple factors in paragraphs (3)(i) through (3)(v) of this definition, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

Additionally, the preliminary engineering for Alternatives A and C included efforts to minimize the use of land from Section 4(f) properties by narrowing the width of the project limits in the vicinity of those properties. Despite these efforts, Alternatives A and C would result in the use of land from two parks and one historic district. As a result, consideration of feasible and prudent alternatives that avoid permanent use of land from these Section 4(f) properties for the effects associated with Alternatives A and C is required. The avoidance alternatives for Alternatives A and C are shown in Figure 15.

The discussion of each avoidance alternative includes consideration of the six factors listed above to determine whether an avoidance alternative is prudent. In addition, the following criteria specific to transportation projects were also considered:

- Adherence to Caltrans Highway Design Manual standards, policies, and engineering practices
  - Proximity/spacing of existing interchanges along theWestside Parkway, State Route 99 and State Route 58
  - Design speed requirements with regard to horizontal curves along main line State Route 58
- Incorporate provisions for future expansion of facilities
  - Consideration for future freeway-to-freeway connectors, not included in the current project scope
- Maintain local traffic circulation
  - Minimize out-of-direction travel
  - Minimize permanent closure of city streets

The city of Bakersfield's Thomas Roads Improvement Program includes four other projects with the following construction and right-of-way costs:

- 24th Street Improvement Project, estimated to cost $43 million
- State Route 58 (Rosedale Highway) Widening Project, estimated to cost $20 million
- State Route 178 Widening Project, estimated to cost $40 million
- Morning Drive Interchange Project, estimated to cost $53 million.

The combined cost of these projects is $156 million. No other project has a scope and magnitude similar to the Centennial Corridor, which has $570 million in allocated funds for construction and right-of-way costs. Cost is one of the six factors considered in determining whether a project is prudent, as provided by 23 CFR 774.17(3)(iv). One way of defining a cost of extraordinary magnitude (based on a method described in CFR Parts 771 and 774) is to compare the cost of a project alternative to the total funds in a program. Any alternative that would cost more than the combined total of all projects in a program would be considered to have a cost of extrordinary magnitude. The Thomas Roads Improvement Program has a total of $726 million available for the projects listed above, inlcuding the Centennial Corridor Project. Another method used to define "cost of extraordinary magnitude" is to adopt the maximum project cost value used in the NEPA alternative screening process. Any alternative that would cost more than $800 million was considered unreasonable and was withdrawn from further consideration, therefore any avoidance alternative that exceeds these values is considered to have a cost of extraordinary magnitude.

6.2 Summary of Avoidance Alternatives

The avoidance alternatives (see Figure 15) discussed below describe seven variations of Alternatives A and C as well as the No-Build Alternative. It should be noted that project Alternative B (Preferred Alternative), described in Section 2.3.2, avoids all Section 4(f) resources and is considered prudent and feasible.Table B.3 summarizes the avoidance alternatives analysis findings.

1. Kern River Parkway Bridge Avoidance: This variation of Alternative A would require extending the proposed State Route 58 Kern River bridge over the Kern River at Mohawk Street and Truxtun Avenue to completely span the 350-foot width of the Kern River Parkway and its volleyball courts, Frisbee golf course, and landscaped areas.

2. Kern River Parkway Tunnel Avoidance: This variation of Alternative A would require building a tunnel beneath the Kern River Parkway. The proposed 4,500-foot-long tunnel would follow the Alternative A alignment. The tunnel would begin just after South Villas Green Brier Lane and cross under the Carrier Canal, Truxtun Avenue, Kern River Parkway, Kern River, and Cross Valley Canal.
3. Southern Avoidance Realignment: This variation of Alternative A would introduce an S-curve beginning at the State Route 99/State Route 58 interchange. The alternative would curve to the south crossing over Stine Road between Quarter Avenue and Fishering Drive, then curve back to the north, crossing over Stockdale Highway about 700 feet farther west than Alternative A. It would then realign with the main northern segment of Alternative A in the vicinity of the Carrier Canal. This variation would also extend Alternative A by an additional 0.2 mile. Replacement of the State Route 58 separation bridges above State Route 99 would be required for this variation.
4. Historic District Tunnel Avoidance: This variation of Alternative A would involve construction of a 4,500-foot-long tunnel that would begin at Real Road/State Route 58, cross under the Stine Canal, and end about 750 feet south of Business Center Drive in the vicinity of California Avenue. This option would also require elevating Real Road by building a bridge over State Route 58. Similarly, a bridge would be constructed to elevate Stockdale Highway over State Route 58.
5. West Avoidance Realignment: This variation of Alternative C would realign State Route 58 about 800 feet farther to the west than that alternative's proposed location. It would also raise the height and lengthen the State Route 58 Bridge over State Route 99, lengthen the California Avenue bridge, lengthen the northbound State Route 99 to westbound State Route 58 Direct Connector Bridge, require a fly over bridge from eastbound State Route 58 to southbound State Route 99 from Chester Lane to north of Stockdale Highway, replace and lengthen the Hughes Lane Bridge. Additional bridges would also be required at Bank Street, Palm Street and Chester Lane.
6. East Avoidance Realignment: This variation of Alternative C would realign State Route 58 to the east of State Route 99 and two potential historic properties along Oakbank Road. It would also raise the height and lengthen the State Route 58 Bridge over State Route 99, raise the height and lengthen the northbound State Route 99 to westbound State Route 58 Direct Connector Bridge, and replace the Hughes Lane Bridge. Additional bridges would also be required at Oak Street, Palm Street, Bank Street and Verde Street.
7. Construct State Route 58 in Median of State Route 99: This variation of Alternative C would require building State Route 58 within the existing median of State Route 99 via an elevated structure. State Route 99 would be widened to the outside to handle the additional width required to build this variation. This would result in 16 freeway lanes within a minimum of 250 feet of right-of-way.

The No-Build Alternative would not result in construction and therefore would not affect any Section 4(f) resources.

6.3 Parks and Recreational Facilities

6.3.1 Avoidance Alternative for the Kern River Parkway

Alternatives B and C are about 0.5-mile northeast of the Kern River Parkway (Mohawk Street and Truxtun Avenue); therefore, they would avoid the parkway, resulting in no impacts. Similarly, the No-Build Alternative would not affect this property because none of the proposed build alternatives would be constructed.

Alternative A

If the Alternative A alignment is moved east or west of its current proposed location to avoid the Kern River Parkway, the alternative would no longer meet interchange spacing requirements. The Caltrans Highway Design Manual requires minimum spacing of one mile between urban freeway interchanges with local streets. The only locations available that meet this requirement are represented in the original alignments for Alternatives A, B, and C. Moving the Alternative A interchange to the east would simply put it in the same location as Alternatives B and C. Also, it is not possible to move the interchange location to the west as the Coffee Road and Calloway Drive interchanges are only 1.4 miles apart. A new interchange placed between Coffee Road and Calloway Drive would leave only 0.7 mile between interchanges. Therefore, variations to avoid the Alternative A impacts to the Kern River Parkway focus only on bridge and tunnel options.

Kern River Parkway Bridge Avoidance

This variation of Alternative A would require extending the proposed State Route 58 Kern River Bridge to completely span the 350-foot width of the Kern River Parkway. Although the bridge would span the park, a temporary occupancy of the park would be required. A temporary occupancy is considered an actual Section 4(f) use if the scope of work and magnitude of change to the Section 4(f) property is more than minor in nature. A temporary occupancy is also considered a Section 4(f) use if there are any permanent adverse physical impacts to the Section 4(f) property. Nor can there be any temporary or permanent interference with any of the park activities or purposes.

The temporary occupancy with this variation would be more than minor in nature because mature landscaping would be permanently removed and the setting of the